

BETTER VILLAGES

OXFORD UNIVERSITY PRESS
AMEN HOUSE, LONDON, E.C.4
Edinburgh Glasgow Bombay
Calcutta Madras Melbourne
New York Toronto Cape Town
GEOFFREY CUMBERLEGE
PUBLISHER TO THE
UNIVERSITY -

First published 1937

Second edition 1938

Third edition 1945

Reprinted 1946

PRINTED BY R. BOURDON AT WESTERN PRINTERS AND PUBLISHERS'
PRESS, 15-23, HAMAM STREET, FORT, BOMBAY, AND PUBLISHED BY
GEOFFREY CUMBERLEGE, OXFORD UNIVERSITY PRESS, FORT, BOMBAY.

• BY THE SAME AUTHOR •

SOCRATES IN AN INDIAN VILLAGE

Editions in Gujarati, Gurmukhi, Hindi, Kannada, Marathi, Roman, Punjabi, Tamil, Telugu, Roman Urdu and Urdu have been published.

SOCRATES PERSISTS IN INDIA

Editions in Roman Urdu and Urdu have been published and editions in Tamil, Kannada and Hindi are in preparation.

SOCRATES AT SCHOOL (IN COLLABORATION WITH W. M. RYBURN)

Burmese and Roman Urdu editions have been published.

BETTER VILLAGES

An Urdu edition has been published, and a Roman Urdu edition is in preparation.

THE INDIAN AND THE ENGLISH VILLAGE

IN HIM WAS LIGHT

An Urdu edition has been published, and Hindi and Marathi editions are in preparation.

WINNING THE PEACE (OXFORD PAMPHLETS ON INDIAN AFFAIRS, No. 25)

VILLAGE READERS (IN COLLABORATION WITH W. M. RYBURN)

In two alternative editions, consisting of eight and six books.

*ALL THE ABOVE BOOKS ARE PUBLISHED BY THE OXFORD
UNIVERSITY PRESS*

THE BOY SCOUT IN THE VILLAGE

An Urdu edition has been published.

A SCHEME OF RURAL RECONSTRUCTION

An Urdu edition has been published.

PITS

Editions in Gurmukhi, Hindi, Roman Urdu and Urdu have been published.

*THE ABOVE THREE BOOKS ARE PUBLISHED BY UTTAR
CHAND KAPUR & SONS, LAHORE*

THE VILLAGE DYNAMO

An Urdu edition has been published.

*PUBLISHED BY R. S. MUNSHI GULAB SINGH & SONS,
LAHORE*

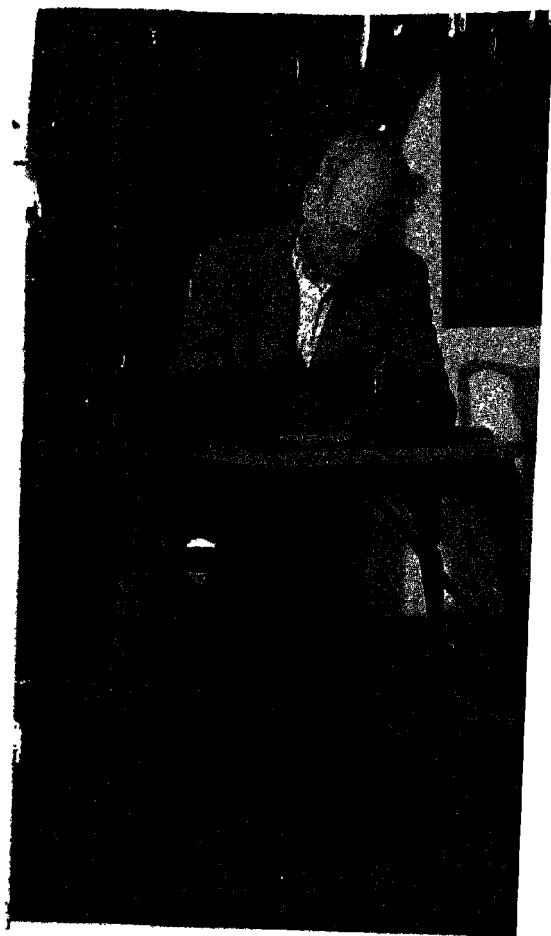
LECTURE NOTES ON RURAL RECONSTRUCTION

An Urdu edition has been published.

PUBLISHED BY THE FEROZE PRINTING PRESS, LAHORE

THE GURGAON EXPERIMENT

PUBLISHED BY THE AUTHOR



BETTER VILLAGES

BY

F. L. BRAYNE, C.S.I., C.I.E., M.C., I.C.S. (RETD.) ,
FORMERLY COMMISSIONER FOR RURAL RECONSTRUCTION AND
FINANCIAL COMMISSIONER DEVELOPMENT, PUNJAB, LATE
BRIGADIER, INDIAN ARMY, AND ADVISER ON INDIAN
AFFAIRS TO THE WELFARE GENERAL IN INDIA

WITH A FOREWORD BY

MAJOR SIRDAR THE HONBLE
SIR SIKANDER HYAT-KHAN, K.B.E., K.B.
THEN PREMIER OF THE PUNJAB



GEOFFREY CUMBERLEGE
OXFORD UNIVERSITY PRESS

FOREWORD

RURAL UPLIFT has come to occupy a prominent place in the programme of rural reconstruction. This is as it should be. The experience of rural organization all the world over has emphasized the necessity of planning out an all-comprehensive rural programme. In Denmark, Ireland and elsewhere rural reform was tried piecemeal and proved abortive. It was not till that great co-operative and rural pioneer, the late Sir Horace Plunkett, evolved his triple plan of 'better agriculture, better business, better living' that the European farmer saw the dawn of a new era. The experience of Indian rural reformers is pointing the same way, and Mr Brayne's valuable thesis is a welcome and timely contribution in the right direction.

It is almost a truism to say that the economic future of India depends primarily on its agricultural population. The worries and joys of the Indian farmer must reflect themselves in the Indian and Provincial budgets and shape the pace of India's trade. As such, the village community is, as it has always been, the bed-rock and sheet-anchor of India's social and economic system. And yet the plight of the average Indian village and the standard of living of an average agricultural home is the least calculated to encourage initiative or to inspire hope for a better economic output. It is now recognized that environments play an important part in tuning up the human factor so essential in the economy of production. Therefore, the neglected rural side is a call to duty which no official or non-official in India can, with wisdom, afford to ignore.

Mr Brayne's name and work is a household word in the rural Punjab. By dint of perseverance and practical sympathy, he has almost single-handed set up a new tradition in the rural Punjab. The ice has already been broken and, with necessary official and non-official enterprise, the results are almost assured. Mr Brayne's latest book combines the imagination of a practical idealist with the constructive planning of a reformer who has moved amongst the masses and stirred them with a new gospel.

As such, everything that he writes is entitled to weight and consideration. Mr Brayne rightly emphasizes in his book that the first essential plank in the uplift edifice is to create the right spirit amongst the village folk—men, women and children. This is imperative; but experience has shown that more often it is ignorance rather than familiarity which breeds contempt, and that in the sphere of rural uplift it is primarily ignorance which, in India as elsewhere, has to be combated. For this, example is obviously the most effective weapon. Let the big and middle-class zemindars who are the natural leaders of the rural side take a healthy initiative, by personal example, in organizing a movement for better villages within and around their spheres of influence. This is a duty which can no longer safely be neglected. The latest widening of the franchise in the rural electorate has opened new vistas of encouragement for those who deserve and win the confidence of the electorate through constructive service. The days of feudal influences are over, and unless the leading zemindars win and retain the support and confidence of their backward and poorer brethren through service they will themselves be abetting their abdication.

Thought, they say, is the one creative power, and thinking on right lines is the first essential of any constructive reform. As such, the necessity for all actual and potential workers in the field of rural uplift to understand the main threads of the movement, and to gain by the experience of one who by sustained effort has earned the gratitude of many of the Punjabis amongst whom he has worked, cannot be over-emphasized. This latest treatise on the subject by Mr Brayne makes that knowledge available in a convenient form. I commend it, as such, to officials and non-officials who are interested in the welfare of the Indian rural side. To ensure results, however, this book has not merely to be studied, it has to be lived. In that effort, I wish the book, its readers and those interested in rural uplift, God-speed.

Simla E.

26 June 1937

S. HYAT-KHAN

FOREWORD

RURAL UPLIFT has come to occupy a prominent place in the programme of rural reconstruction. This is as it should be. The experience of rural organization all the world over has emphasized the necessity of planning out an all-comprehensive rural programme. In Denmark, Ireland and elsewhere rural reform was tried piecemeal and proved abortive. It was not till that great co-operative and rural pioneer, the late Sir Horace Plunkett, evolved his triple plan of 'better agriculture, better business, better living' that the European farmer saw the dawn of a new era. The experience of Indian rural reformers is pointing the same way, and Mr Brayne's valuable thesis is a welcome and timely contribution in the right direction.

It is almost a truism to say that the economic future of India depends primarily on its agricultural population. The worries and joys of the Indian farmer must reflect themselves in the Indian and Provincial budgets and shape the pace of India's trade. As such, the village community is, as it has always been, the bed-rock and sheet-anchor of India's social and economic system. And yet the plight of the average Indian village and the standard of living of an average agricultural home is the least calculated to encourage initiative or to inspire hope for a better economic output. It is now recognized that environments play an important part in tuning up the human factor so essential in the economy of production. Therefore, the neglected rural side is a call to duty which no official or non-official in India can, with wisdom, afford to ignore.

Mr Brayne's name and work is a household word in the rural Punjab. By dint of perseverance and practical sympathy, he has almost single-handed set up a new tradition in the rural Punjab. The ice has already been broken and, with necessary official and non-official enterprise, the results are almost assured. Mr Brayne's latest book combines the imagination of a practical idealist with the constructive planning of a reformer who has moved amongst the masses and stirred them with a new gospel.

As such, everything that he writes is entitled to weight and consideration. Mr Brayne rightly emphasizes in his book that the first essential plank in the uplift edifice is to create the right spirit amongst the village folk—men, women and children. This is imperative; but experience has shown that more often it is ignorance rather than familiarity which breeds contempt, and that in the sphere of rural uplift it is primarily ignorance which, in India as elsewhere, has to be combated. For this, example is obviously the most effective weapon. Let the big and middle-class zemindars who are the natural leaders of the rural side take a healthy initiative, by personal example, in organizing a movement for better villages within and around their spheres of influence. This is a duty which can no longer safely be neglected. The latest widening of the franchise in the rural electorate has opened new vistas of encouragement for those who deserve and win the confidence of the electorate through constructive service. The days of feudal influences are over, and unless the leading zemindars win and retain the support and confidence of their backward and poorer brethren through service they will themselves be abetting their abdication.

Thought, they say, is the one creative power, and thinking on right lines is the first essential of any constructive reform. As such, the necessity for all actual and potential workers in the field of rural uplift to understand the main threads of the movement, and to gain by the experience of one who by sustained effort has earned the gratitude of many of the Punjabis amongst whom he has worked, cannot be over-emphasized. This latest treatise on the subject by Mr Brayne makes that knowledge available in a convenient form. I commend it, as such, to officials and non-officials who are interested in the welfare of the Indian rural side. To ensure results, however, this book has not merely to be studied, it has to be lived. In that effort, I wish the book, its readers and those interested in rural uplift, God-speed.

Simla E.
28 June 1937

S. HYAT-KHAN

CONTENTS

CHAPTER	PAGE
FOREWORD BY MAJOR SIRDAR THE HONBLE SIR SIKANDER HYAT-KHAN	ii
PREFACE	iv
NOTE TO THE THIRD EDITION	v
I THE TASK	1
II FIRST PRINCIPLES—Permanence and spontaneity. Ex- ample: Government example—Government official's example—ex- ample of educated classes—rural leader's example—conclusion ...	3
III FIRST PRINCIPLES (contd) — Self-help. How to start work. The standard of living	14
IV CONTRIBUTORS—Providence—Government—the farmer —his partner—the land—cattle—the capitalist—the shopkeeper—the artisan—the village official—the menial	23
V HOME AND VILLAGE—General: The home—the village. What must be done: Light and air—cleanliness—wells—the village pond—miscellaneous	26
VI THE FARM—Capital. Land. Water. Manure. Good seed. Strong cattle. Proper implements. Common sense and hard work. Attention to crop diseases and pests	52
VII THE PROBLEM OF EROSION—The menace. The remedy. The application of the remedy. Canal Catchment areas. Fuel. Conclusion	69
VIII CATTLE—The improvement of cattle. Cattle breeding societies. How District Boards and district authorities can help How municipalities can help. Covering fees. Export trade ...	92
IX HEALTH—Cleanliness. Food and other necessities. Diseases. Eyes: Dirt—doctors—eye diseases are catching—the cleaning of eyes—the rural dispensary—newborn babies—general. Organiza- tion: The payment of fees—curative and preventive—health units ...	103
X WOMEN'S WORK—The hand that rocks the cradle. Educa- tion of girls. Trained workers and home-making institutes. Women's Institutes. A welfare service. Health and medical work: Difficulties— doctors—health visitors and midwives—conclusion	120
XI VILLAGE ORGANIZATION—The problem. The solution. Compulsion or self-government. Village Organizations: The pan- chayat—the co-operative society—sanitary committees—other bodies. The village book of progress	141

CONTENTS

vii

CHAPTER

PAGE

XII CO-OPERATION — Principles. Various kinds of societies. Better Living societies—Cattle Breeding societies—Arbitration societies—Consolidation of Holdings societies—Industrial societies ... 151

XIII THE VILLAGE SCHOOL 164

XIV DISTRICT ORGANIZATION — The Officers' Board. The *Dehat Sudhar* Committee. A multiplicity of organizations. Rural Community Boards. Lay-out for uplift and a youth movement ... 177

XV PUBLICITY — Village guides—wireless broadcasting—magic lanterns and cinemas—dramas—songs and glees—gramophone records—the press—district newspapers—coloured pictures and posters—books—other printed material—models and miniatures—exhibitions, shows, *melas*—competitions—public meetings and speeches—demonstrations—weeks—school propaganda—model villages—conclusion ... 194

XVI RURAL FINANCE — The present system. The future. Old debts 220

XVII CRIME AND FACTION — Work and play. Better homes. Organized villages 230

XVIII SIDE-LINES — Hard work and co-ordination: Poultry—dairying—vegetables and fruit—dates—sheep and wool—goats—horse and mule breeding—bees—silk—lac—fish—handicrafts 235

XIX MISCELLANEOUS — Ornaments. Unwanted dogs. Cactûs. Locusts. Accuracy and training. A weekly holiday. Quinine. Untouchability. Cattle-lifting and tattooing. Armistice Day and the ex-soldier. Game preservation. Ribbon development. Urban uplift... 245

XX WINNING THE PEACE — The ex-soldier: holding the ex-soldiers together. 'Uplift' or post-war reconstruction: The raising of purchasing power and taxability—the standard of living and the urge to raise it. A Development Scheme. Objective—The Programme: Land—water and power—farming—industry, maximum possible development—health—women's welfare—bribery will disappear—education. Machinery and administration? Cost and finance—short term plan—conclusion. The New Order in home and village 260

APPENDICES

I LIST OF BULLETINS, LEAFLETS AND PAMPHLETS ... 290

II SOME HANDY BOOKS FOR RURAL WORKERS ... 291

III LIST OF MAGIC LANTERN SLIDES 294

IV LIST OF GRAMOPHONE RECORDS 295

V LIST OF RURAL RECONSTRUCTION MODELS ... 300

INDEX 302

LIST OF ILLUSTRATIONS

THE AUTHOR	...	..	..	...	Frontispiece
					FACING PAGE
THE PROPER MANURE PITTS	...	...	...	...	16
WASTE OF MANURE	...	...	...	...
<i>Kachcha</i> HOUSES	...	...	...	...	17
DRAIN UNDER CONSTRUCTION	...	...	...	...
A WELL-VENTILATED HOUSE	...	...	...	...	48
THE PROPER WELL	...	...	...	...
ORNAMENTAL DECORATION	...	...	...	...	49
THE NEW ORDER IN THE HOUSE	...	...	...	...
A CHIMNEY IN MAKING	...	...	...	...	64
CHIMNEY MADE OF MUD ONLY	...	...	...	...
BUNDS TO HOLD UP WATER	...	...	...	...	65
BUND BUILT BY JOINT EFFORT	...	...	...	...
RECLAIMING BY SMALL BUNDS	...	...	...	...	96
FLOOD RESISTING VEGETATION	...	...	...	...
GOOD EXAMPLES OF U.C.-OPERATION	...	...	...	...	97
IMPROVED CATTLE	...	...	...	...	112
THE VILLAGE RADIO	...	...	...	...	113
VILLAGE LIBRARY AND READING-ROOM	...	...	...	...
A WELFARE WORKER AND HER CLASS	...	...	...	...	208
CO-EDUCATION	...	...	...	...
ROAD-IMPROVING	...	...	...	...	209
THEY ARE HAPPY	...	...	...	...
A FIRST-CLASS CROP	...	...	...	...	224
TOMATOES	...	...	...	...
WASHING THE SHEEP	...	...	...	...	225
WOOL CLEANING	...	...	...	...
					PAGE
THE MAGIC <i>Bhoosa</i> -BOX	...	...	...	...	47
CONSOLIDATION OF HOLDINGS	...	...	...	...	53
THE USE OF JEWELLERY	...	...	...	...	247

CHAPTER I

THE TASK

THERE is a very great deal wrong with village life, and the following chapters try to describe in some detail each item that I consider wrong and what I think should be done to put it right. What will suit one village, however, will not always suit another. Conditions vary greatly not only all over India but even all over the Punjab, and it is impossible to prescribe one single remedy for each and every area or for each and every defect. The best one can do is to set down the general principles and leave local workers to modify them to suit the local conditions in which they find themselves. I shall not carry my reader with me, however, unless I can explain exactly how the various reforms that I suggest can be carried out. Otherwise, instead of considering each suggestion on its merits, the reader will be continually saying: 'This is all very well—defect after defect, and remedy after remedy—that is easy enough. What I want to know is how is he going to get it all done? How will he convert the printed words into actual action in our innumerable villages?'

The answer to these very reasonable questions is that the villager has to be inspired to put his home and village right himself, and the main problem of Rural Reconstruction is not so much to find out what is wrong and how to put it right, as to put a dynamo into the village, so that the villager himself will not only realize that things are wrong but will go on thinking and working in co-operation with his fellow-villagers and with Government to put them right. This dynamo is the ambition to raise the standard of living.* Wherever there is this ambition the people will sink their differences and join together, saving, scraping, sacrificing, working early and late, and, searching for ways to improve their homes, farms and villages. Till then they have

See pp. 5, 19, 122.

to be driven to carry out every improvement, however obvious and simple and profitable, and once the driving force is removed, work stops. In fact until this desire to rise can be put into the villager's heart, we are rolling stones up a hill, like Sisyphus of old, and as soon as we stop our unnatural efforts, things will soon be as bad as ever or even worse.

This book sets out to show both how this ambition for better things is to be implanted and how, once implanted, science and experiment and experience have enabled it to be achieved.

The depression and the crisis caused by the former fall in prices have ushered in a new era in the Punjab. If we wish to survive in this new era there must be a truce to all wasteful habits and extravagances, to the old ways of idleness both of mind and body, and to the old quarrels, factions and parties. The villager's mind must be alert to learn, and his hands to act upon what he learns. Family must not be divided against family, nor brother against brother, nor religion against religion. Quarrelling, jealousy, and factions of all kinds must cease. Capitalist and agriculturist, rural and urban, official and non-official, land-owner and tenant, instead of abandoning the land while they fight to get the most out of each other, must all work together to get the most out of the land.

When a mighty flood comes down in one of our great rivers, there is said to be truce of God declared between all the birds and beasts of the jungle. So must there now be in the Punjab, in the presence of one of the greatest crises in its history. Self-help and mutual help are the only remedies for our difficulties and these must be born of a knowledge that a better, happier and healthier life is possible, and of a firm desire and intention to achieve that higher standard of life if it is humanly possible to do so.

The old pattern of village life has failed—both in good times and in bad. A new plan is wanted, based not on material things but on spiritual. Rural Reconstruction is nothing more or less than the revival of the old-fashioned virtues of hard work, thrift, self-control, self-respect, self-help, mutual help and mutual respect.

All this will mean a revolutionary change for the villager: his outlook towards his work, towards his resources, his cattle, his family, his farm, his neighbours and his Government must be entirely changed. Is it worth it and is it possible? I say decidedly 'Yes' to both questions, and so do those villagers who have tried out this programme of rationalization or modernization. The alternative is squalor, discomfort and suffering; in fact the life once described in the West, before a similar programme of reconstruction was tackled there, as 'nasty, brutish and short.'

That it is perfectly possible to make a vast improvement in every sphere of village life I am absolutely convinced, and I hope the reader who bears with me to the end of this book will be equally convinced.

CHAPTER II

FIRST PRINCIPLES

1. PERMANENCE AND SPONTANEITY

We keep on telling the villager to take pride in his home, farm and village, to abandon his besetting sins of apathy, faction and extravagance, to sacrifice his ease and leisure and to join with his fellows and work hard and eagerly to raise his standard of living. Our appeals leave him cold, and without strong persuasion he often will not even pick up money lying at his feet or stop wasting what he already has. He seems quite indifferent either to his happiness, his health, or his prosperity. Laws are made to help him to ease his load of debt. Does he use them? No, he concludes with what we call his natural enemy the creditor to evade the law, and borrows still more money at even worse rates. At certain seasons and for certain purposes his ancient customs demand that he should spend money freely, and spend it he will, cost what it may to get. He does not even want to get out of debt,* he knows that any improvement in his farm will mean

* See p. 227.

more money, not for him but for his creditor, and so he is indifferent to the improvement of his farm, and he even seems indifferent to the welfare of his family.

Why this seemingly illogical conduct? The villager is a shrewd fellow; why does he follow what seems to us such an idiotic course? For the explanation we must look back a bit. For centuries he has been the sport of disease and climate, and this utter dependence on a tyrannical and capricious Nature has made him apathetic and fatalistic. Farmed he never so well, if locusts came or the rains came not, he starved; and farmed he never so badly, timely rain would give him a bumper crop. If plague or pestilence came, his family, his cattle, his village might be wiped out, and nothing he could do would help. He was utterly at the mercy of Nature, and helpless to protect himself.* What wonder that ages of this uncertainty made him a fatalist, and gave him for motto, 'Eat, drink and be merry, for to-morrow we die.'

Then came science, research and modern engineering, enabling us to control epidemic disease, to make two and even three blades of corn grow where but one grew before, and to bring water and food to dry and hungry places, and so to remove the causes of this apathy and fatalism. Education, however, lagged behind science, and although the reason for fatalism had gone, the fatalistic mentality remained. The villager saw that the days of famine and pestilence had gone, but he had not yet realized that an entirely new kind of existence was possible for him, and that this new kind of existence was not only possible, but it was extremely desirable and well worth changing his age-old mode of life to obtain. He still had the mental outlook of the old eat-drink-and-be-merry-for-to-morrow-we-die days, and so the new wealth brought to him by modern science was still squandered in the old ways, with this difference only—that whereas in the old days his outbursts of extravagance and display

* In certain areas apathy and listlessness are much increased by malaria or hookworm.

were few and far between, he could now do so more frequently and more intensively. Gold ornaments took the place of silver; litigation, social expenses and other extravagances increased by leaps and bounds; population multiplied and debt increased as fast as credit.

Then came the crash. Prices dropped to half in a night, debts doubled, credit went, crops were unsaleable, and except for a box of trinkets the villager had little except debts and perhaps a well-built house* to show for a period of prosperity which he had never seen before and may never see again. This was all because he had never conceived the ambition to raise his standard of living. Had he done that, things would be very different now. The essence of a rising standard of living is security. It is no use rising only to fall again, as soon as things go at all wrong. The man who intends to rise is for ever saving, putting something by, and had he been so minded, the Punjab villager, with his memories of the terrible insecurity and uncertainty of the old days would not only have satisfied his ambition to rise by providing all the necessities of civilized rural life, but he would have endowed them too. But no, he was without ambition to rise, and merely extended and intensified his standard of show, luxury and extravagance. And with no one to teach him and no example to follow, how could the Punjabi learn how to make the best use of the new money which canals and high prices brought him?

The past failure was due to the absence of a definite desire and determination to raise the standard of living,† and without that desire and determination, there can never be any hope of permanent improvement in village life, and no hope of spontaneous effort at self-improvement. The past is past, however, and it is no use crying over spilt milk. What about the future? What is being done to break fatalism and produce an incentive to self-improvement in the heart of the villager?

* But without light, air or any comforts or amenities.

† See pp. 19, 122.

Good work, excellent work is going on all over the Punjab. You can travel all day and find nothing that offends either eye or nose. Village after village and *zail** after *zail* have been turned into models of the new life. Marvellous changes have been made and there is a feeling of life and movement in the air. Have we found the incentive then? Will this work last and spread? Alas, no! This work is not being done by villagers determined to live a better life but by villagers determined to please their District Officers. A good enough motive in its way, but not the motive we are looking for. There is no permanence about this kind of work. What if the District Officer's attention is diverted elsewhere, or he wants something different done, or in a different series of villages?

Neither easy prosperity—witness Lyallpur, for more than a generation perhaps the richest peasantry in the world—nor debt are incentives to hard work and self-improvement. Hunger is no incentive. The hungriest areas are often those with most work waiting to be done. Money for money's sake is no foundation of a better village movement.

Man shall not live by bread alone. Man needs something more than food or money. The mere increase of wealth will not make people either good, clean, happy or peaceful. Man must have ideals, a spiritual inspiration. It is what money can buy that must be the incentive. In some countries this vision of better things and living examples of a better way of life have been provided by various kinds of non-official agencies and institutions, and it has been this vision which has inspired the people to labour for the increase of their wealth and to use the new wealth they have acquired for achieving and securing their new ideals. The Punjab has had no such vision and no such ideals; greater wealth meant greater credit, greater extravagance and greater debts. Had such cultural institutions

* A *zail* is a group of villages, the subdivision of a *tahsil*, with a leading local landlord called a *zaildar* who is given a small honorarium to look after them.

and agencies been adequately developed in the Punjab, it might have been possible perhaps for Government to leave them to instil the desire for better things, and itself to concentrate on the material side of the new life. But that is not the case, and it is Government's main task to teach the villagers so to want a better, fuller, happier, healthier life and to instil such a desire for higher standards of living, that they will clutch at whatever material means are possible of obtaining and maintaining them instead of having to have them almost forced upon them by Government.

The only real, true incentive is an inborn desire for something better for its own sake and not to please some outside authority. No village can be permanently improved from outside and no home can be permanently improved until its inmates themselves want to improve it. For permanence we must have spontaneity, and spontaneity means a burning desire for better things in the hearts of the villagers themselves.

This does not mean that all the good work now going on should stop. Far from it. Who can say that it will not sooner or later arouse the very ambition for better things that we are looking for? No; this work must continue, but the way to look at it is not as rural construction itself, but as a large-scale demonstration of what Rural Reconstruction is, a form of publicity or propaganda done, under official stimulation and direction, by the people themselves, and conducted in the hope that those who join in it, or who see it, will be so pleased with the result and so impressed with the ease and simplicity with which, once they all work together, the result is achieved, that they will desire it; and organize themselves to obtain it, for its own sake, to please themselves and not to please Government.

Whether this would ever come about is needless to speculate. Our job is to take advantage of this widespread activity to lay the foundations of a real and permanent movement of spontaneous self-improvement.

What are these foundations?

1. Village organizations.

2. Knowledge:

(i) Mass education; i.e. publicity, propaganda, official persuasion, etc.; in particular women's organizations and welfare work of all kinds

(ii) School education, in particular girls' education

3. Example and leadership

4. A spirit of service

Each of these will have a section or a chapter to itself, but, in a word, there can never be any permanent or spontaneous improvement of the village without some AUTHORITY, SOCIETY or ASSOCIATION* inside the village to plan the work and keep the people up to the mark.

KNOWLEDGE must be universal, and not merely the monopoly of a select few. Every man, woman, and child must know what is wrong and how it can be put right. For this, schools for boys and girls are not enough; every form of adult and general education is required which our resources can command. This means the continuance and extension of the great Government drive now in progress, and the maximum development of all possible forms of publicity.

It is particularly the women and children who must be given the knowledge of better things, as it is the children whose ways are not set, who are free from the chains of customs, and it is the mothers and housewives who are responsible for the standard of living and who set the pace of civilization in town and country alike. There can never be any real desire for improvement in the homes until the HOUSEWIFE†—the *gharwali*—knows what can and should be done to make home and village happier and healthier. No country can go ahead either of its women or of its children, so it is to these two classes to which we must make our greatest appeal. The easiest way of teaching and demonstrating and suggesting better homes and better farms is to have

* See chaps. xi, xii.

† See chap. x.

the EXAMPLE of better homes and better farms in every village for the people to see.

To uplift a country there must be a strong SPIRIT OF SERVICE abroad. The finest example of this spirit can be seen in our own Royal Family. Not a day passes but they are busy in social work of some kind or other. National progress depends upon leadership and unpaid service. Every man and woman, official or non-official—and every child too—has a duty towards his fellow-men and his country, and this duty can only be carried out by the loyal and ungrudging devotion of time, effort, and money to doing whatever we can to help our fellow-men and women to a fuller and happier life. For the official, efficiency is not enough. Something more is required, human sympathy and a spirit of service to breathe life into the dry bones of the administrative machine.*

II. EXAMPLE

Government example. Whatever Government tells the people to do, it must do itself. Otherwise it stultifies itself and is wasting money and effort. It is no use telling villagers to be clean if those who visit Government offices, tahsils, thanas, and rest-houses with their petitions or other business find them littered with rubbish, or have to use the surrounding country for urinal and latrine. Mosquitoes must not be able to multiply on Government land or in borrow-pits dug by Government in the neighbourhood of homes or villages. The management of Courts of Wards Estates gives Government an excellent opportunity of carrying out its whole village programme in the most practical manner possible. And so on all through the programme. Government must be very careful to practise what it preaches.

* In the *Punjab Land Administration Manual*, the Collector of a district is likened to the steward of a great estate. A rare simile. The principal care of a modern steward is the welfare and happiness of his lord's tenants and dependants.

The Government official's example. The Government servant, whether as servant or citizen, has a similar duty. Whether it is vaccination, or cleanliness, or girls' education, or thrift, he must see that what he or his colleagues are preaching is not given the lie by the life and conduct of himself or his family. He cannot teach one kind of life and live another. A high ideal, but we shall get nowhere without ideals, and if we want good citizens in the villages we must be better citizens ourselves, as the essence of progress is leadership.

The example of the educated classes. Perhaps the biggest responsibility falls on those who have had the advantage of higher education and have seen or should have seen the new light of better living. If they do not help to uplift their less fortunate brethren who else can? All institutions of higher education and learning should therefore pay the very greatest attention to this whole subject and as far as possible see to it that no student shall fail to acquire both a full knowledge of the new life and a firm determination by example and precept to spread it wherever his future career shall take him.*

The rural leader's example. Human beings are *bher chah*, sheep through a hedge; where one goes the rest follow. The best way, therefore, of getting people to do new things is to show them working models. As long as you merely talk and explain, simple people are hard to convince and harder still to move to action. Show them the thing itself in working order and they will jump to it at once. We must therefore have working models of better homes and better farms in every village. We do not want official farms and homes everywhere, as what Government does is always suspect. No one believes that Government has done what it does without special powers and special expenditure. We want ordinary workaday models in ordinary daily use by ordinary people. And we can have* them. In every village there is someone, and in many villages several people, who are in common duty as good citizens, bound to carry out to the

* See p. 212.

utmost the rural policy of their Government. In return for the favours and kindnesses it continues to show them, Government should insist upon their doing all in their power to live the new village life in their homes and on their farms. These favoured people, are the jagirdars* and zaildars,† the rural gentry and bigger landlords, ilaqdars,* inamdars,* sufedposhes,* lambardars,‡ patwaris,§ ex-military men, schoolmasters, and soon, we hope, school-mistresses too.

Many of the zaildars and their assistants are already doing a very great deal to help, but some are getting other people to do things rather than setting a complete example in their own homes; and a certain number of them are doing this work less for its own sake than to please Government.

The bigger landlords have not yet as a class begun to pull their weight in the village, and in their own interests just as much as for the sake of the country at large, they must abandon their suicidal policy of neglecting their estates and tenantry and dependants and their general duty to the countryside that gives them their living and position. There are notable exceptions to the general rule, of course, and in some ways the Punjab landlords are very good to their tenants and dependants, but not in the way of making themselves and all around them living, working models of the new village life. And so too with all the rest of the rural leaders. Their position includes responsibilities as well as rights and privileges. Many of them are in receipt of actual honoraria of one kind and another, for various services rendered or to be rendered, and all these favours carry the definite condition of active loyalty. How can loyalty be better shown during the critical days we live in, than by carrying out to the full the measures designed by Government to enable the village people to live in peace and happiness, and to raise their whole standard of living, economic, hygienic and social?

Rural dignitaries with Government titles and honoraria.

† See p. 6, n. 1.

‡ Village headmen.

§ Village revenue accountants and field mappers in charge of the village doomsday books.

The lambardar's office is hereditary, and the lambardar depends more on the birth than on merit for his position. But is it not time that he should be at least able to read and write? In a world that depends so much on the written word, and under a Government that is straining every nerve to make the people literate, can an illiterate man adequately represent Government in the village? Is it not time that all new lambardars born after, say 1930 should be 'primary pass'? And a few years later let the standard be raised to 'middle pass.'

The education authorities are trying to make the schools the centre of light and leading in the villages, but the average village schoolmaster is low-paid and poorly educated, and his wife often has no training or education at all. A beginning is being made with small domestic-training classes for village schoolmasters' wives, so that they may be able to help both in and outside the village school, and enable their husbands to set the example they should of the new life.

Fifty years ago the patwari did whatever was then known of village uplift; he reported crime, disease, and other calamities. Even now unofficially, he often takes a leading part in the campaign, but officially his services are not supposed to be diverted to this new work, and his frequent opposition to such items as the consolidation of holdings is taken for granted. The patwari could easily be the village guide and leader; and that without any detriment whatever to the performance of his other duties, as it is not his time we want but his goodwill. But he would first have to be somewhat modernized. At present he is a bit out of date; his education and outlook are much the same today as they were a generation ago. To fit him to be the principal local agent of village uplift, the patwari would require a better education, a full course of 'village uplift' and better pay and prospects. The cost would run into lacs, but the all-round gain to the villages would be measured in crores.

As for the ex-military man, the Army is now making Rural Reconstruction a subject for the training of the serving soldier.

Besides being an excellent general knowledge subject, by reason of its being the domestic concern of every soldier, Rural Reconstruction means healthy recruits and contented pensioners; it is one more link between the officer and his men and between the regiment and its recruiting area. Putting it into the curriculum of the young soldier was an altogether happy thought, and will bring a very powerful ally into the field to help us. Although district authorities will have to pay special attention to the returned soldier, the soldier himself must not expect the millennium to dawn in a week. He must expect disappointments and rebuffs, and he must even be ready to find those from whom he had expected help trying to side-track him and thwart his efforts. The village is still full of factions and vested interests, and petty officials are sometimes very petty. But if he puts his own home and farm right,* bands himself together with others who are doing the same and refuses to be drawn into factions, he will win through in the end, and be enabled to lead his village to better things.

Conclusion. Until the privileged classes adopt the new pattern of living it is useless to expect the ordinary villager to make a move. The poor and the humble always are those who are supposed to be socially superior or more wealthy and therefore to know better. They will copy hard work, thrift and culture when they see them just as they now copy extravagance, idleness and a low standard of living. The new life must therefore begin from the top, not from the bottom, and leaders must be made to lead, if we wish it to spread of its own accord through the countryside.

*He can at once set a wonderful example of thrift by keeping a savings bank account, taking out insurances, etc.

CHAPTER III

FIRST PRINCIPLES (*contd.*)

I. SELF-HELP

SELF-HELP must be the invariable rule of work. The main job of Government is to plan, teach, train, organize and supervise. The actual work and the actual payment must be done by the villager himself. There are some 35,000 villages in the Punjab, and if Government attempts to finance or carry out actual work in even a tenth part of this number, its resources will at once be exhausted and it will no longer be able to do the essential work of planning, organizing and co-ordinating which it alone can do. Government revenues are strictly limited, and are almost completely absorbed by the daily routine of administration, so that any movement that relies solely upon them for the actual work and for its own expansion is doomed to perpetual limitation and eventual stagnation. If the people themselves provide the money and do the work, the only limit set to expansion is the enthusiasm of the people themselves and the steadily increasing resources which the movement brings to them.

The Punjab Ministry, soon after it took office, launched an intensive scheme, providing five lacs the first year rising to fifteen the third* and taking in a fresh tahsil in each district each year. Five lacs will go nowhere in twenty-eight tahsils, but if the people co-operate, Government's five lacs immediately become five crores. We have now got provincial autonomy, but self-government cannot possibly be better than the people it governs. If, therefore, people want a vigorous and helpful Government, they must be vigorous and helpful themselves.

Work and payment are tonics. Doses and free issues kill initiative. Years of free quinine and free bulls, so far from teaching the people to buy their own have convinced them that

* This is separate from the many extra lacs provided in the ordinary departmental budgets.

these things must always be given free. No one appreciates free stuff. If you hand a book to a visitor free of charge, he will leave it on your office table when he goes away. If he has to pay for it, he will read it and make his whole family do so too.

Self-help brings pride and self-respect. 'We built that school', 'We made that road', 'That is our bull.' And self-help leads to more self-help. Once people find that by their own unaided efforts things can really be made more comfortable, they will try again and again and again (see pp. 154, 156). Some people say 'Don't ask the village or the villagers to spend any money.' The Royal Commission said the opposite. It is the desire to spend in order to achieve a higher standard of living that must be the main incentive to thrift, hard work and good farming.

I do not say that Government or the District Board must never give any financial help, but it must never give the whole sum. The village or the individual must give as much in money as they possibly can, and must of course provide the labour. It is wrong to pay any one who is not actually starving for doing his own work.

There is a favourite argument one often hears from those who are trying to get out of paying for necessities, so that they may keep their own money for extravagances: 'Oh! what about the poor? How will they get these things?' Leave the poor alone for a bit. Why this sudden anxiety about them? Let all those who can pay buy what they require, and then we shall be able to see who is left, and by the time that has happened and the generous villager has given a little here and a little there to friends and neighbours whom he knows are hard up, there will be precious few left for free public charity. Whatever it is, whether it is bulls or doctors' fees, payment must be made fashionable. The villager must be too proud to beg or to be beholden to any one for money, services, or anything else that he can possibly pay for or provide himself.

In village discussions remissions of land revenue are often put forward as the ideal method of improving village life. Remis-

CHAPTER III

FIRST PRINCIPLES (*contd.*)

I. SELF-HELP

SELF-HELP must be the invariable rule of work. The main job of Government is to plan, teach, train, organize and supervise. The actual work and the actual payment must be done by the villager himself. There are some 35,000 villages in the Punjab, and if Government attempts to finance or carry out actual work in even a tenth part of this number, its resources will at once be exhausted and it will no longer be able to do the essential work of planning, organizing and co-ordinating which it alone can do. Government revenues are strictly limited, and are almost completely absorbed by the daily routine of administration, so that any movement that relies solely upon them for the actual work and for its own expansion is doomed to perpetual limitation and eventual stagnation. If the people themselves provide the money and do the work, the only limit set to expansion is the enthusiasm of the people themselves and the steadily increasing resources which the movement brings to them.

The Punjab Ministry, soon after it took office, launched an intensive scheme, providing five lacs the first year rising to fifteen the third* and taking in a fresh tahsil in each district each year. Five lacs will go nowhere in twenty-eight tahsils, but if the people co-operate, Government's five lacs immediately become five crores. We have now got provincial autonomy, but self-government cannot possibly be better than the people it governs. If, therefore, people want a vigorous and helpful Government, they must be vigorous and helpful themselves.

Work and payment are tonics. Doles and free issues kill initiative. Years of free quinine and free bulls, so far from teaching the people to buy their own have convinced them that

This is separate from the many extra lacs provided in the ordinary departmental budgets.

these things must always be given free. No one appreciates free stuff. If you hand a book to a visitor free of charge, he will leave it on your office table when he goes away. If he has to pay for it, he will read it and make his whole family do so too.

Self-help brings pride and self-respect. 'We built that school', 'We made that road', 'That is our bull.' And self-help leads to more self-help. Once people find that by their own unaided efforts things can really be made more comfortable, they will try again and again and again (see pp. 154, 156). Some people say 'Don't ask the village or the villagers to spend any money.' The Royal Commission said the opposite. It is the desire to spend in order to achieve a higher standard of living that must be the main incentive to thrift, hard work and good farming.

I do not say that Government or the District Board must never give any financial help, but it must never give the whole sum. The village or the individual must give as much in money as they possibly can, and must of course provide the labour. It is wrong to pay any one who is not actually starving for doing his own work.

There is a favourite argument one often hears from those who are trying to get out of paying for necessities, so that they may keep their own money for extravagances: 'Oh! what about the poor? How will they get these things?' Leave the poor alone for a bit. Why this sudden anxiety about them? Let all those who can pay buy what they require, and then we shall be able to see who is left, and by the time that has happened and the generous villager has given a little here and a little there to friends and neighbours whom he knows are hard up, there will be precious few left for free public charity. Whatever it is, whether it is bulls or doctors' fees, payment must be made fashionable. The villager must be too proud to beg or to be beholden to any one for money, services, or anything else that he can possibly pay for or provide himself.

In village discussions remissions of land revenue are often put forward as the ideal method of improving village life. Remis-

sions, however, will not help, and will in some ways only make things worse. They will cripple Government on the one hand while on the other they encourage the villager to think that no effort is required of him. The actual relief to the individual villager is often only measured in annas, whereas we can teach him to increase his resources in terms of many rupees. Special remissions are doubtless necessary to meet special disasters but they are themselves yet another disaster. The first and principal sufferer from remissions is always the villager, as when money is scarce it is the outlying dispensary and school which have to be closed and the village road which cannot be mended. Moreover, nobody pretends that reductions of land revenue or *abiana** will stimulate better farming or develop leadership among the villagers. It is only where self-help and initiative are well developed that reduction of taxation stimulates progress. Most of what is now being done to improve the village is being done entirely by Government effort, whether it is vaccination, ventilation or better seed. Government therefore wants all the revenue it can get in order to teach the villager better ways of living and farming and to instil into him the ambition to raise his standard of living, which will in turn stimulate him to work hard, think hard and organize himself in order that he may realize his ambition to rise in the scale of human existence. If we fail and remissions have to be the order of the day, Government will have to reduce its own standard to that of the worst farmer and the most careless and thriftless villager!

The best of all forms of self-help is the co-operative society which is dealt with in Chapter XII. Co-operation is not only self-help but mutual help, and its organization can be made largely self-supporting.

The panchayat† is another form of self-help, as it can levy both money and services for community work and can also help to pay for its own supervision. So of course are the Boy Scout

* Canal water rate.

† See p. 146.

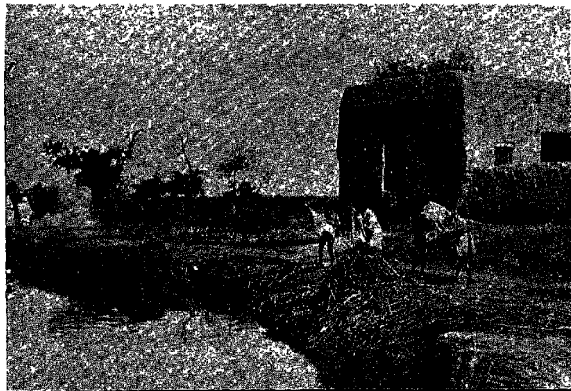


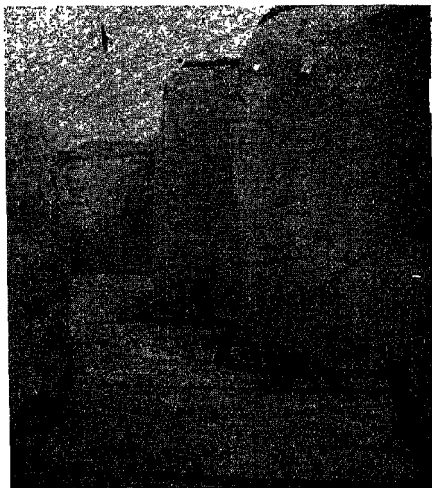
THE PROPER WAY

To dig and use manure pits—they must be outside the village circular road. (See p. 31)

THE WRONG WAY

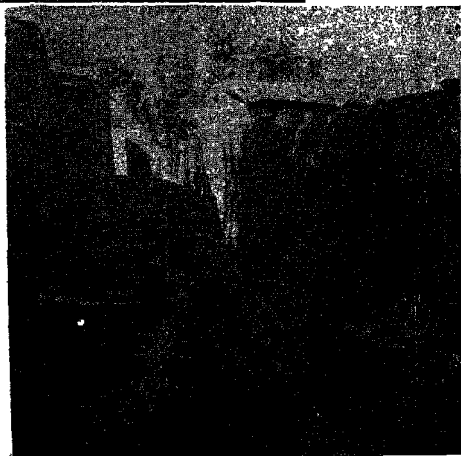
If rubbish is thrown into ponds it wastes manure and poisons the water. (See p. 39)





Even *kachcha*
houses can have
pakka paving
and drains.

(See p. 33)



Drain under
construction
and the insani-
tary conditions
which it will
remedy.

movement, the Red Cross and all other associations which organize people to work or to pay* or to do both for the common good.

II. HOW TO START WORK

In a district I feel sure that the best way to start is by a barrage of publicity* and mass instruction, so that the pros and cons of Rural Reconstruction may be discussed in every village. Meanwhile a *Dehat Sudhar* Committee† should be formed to draw up a programme item by item, start a village newspaper‡ and to chalk out and execute a plan of campaign. An Officers' Board§ is, of course, essential to get the best value out of the efforts of Government.

To the individual I would give a word of warning. Abandon all idea of superiority and patronage; the village is the most ancient institution in the world and must be approached with respect and humility. Do not expect to be received with open arms; the village has long been exploited by outsiders and is very suspicious of strangers. The village is full of ancient knowledge and experience; you must learn therefore before you can teach. Get into the village—live in it if possible—learn its language and its ways. Discuss with the villager his problems and difficulties and their remedies, work with your own hands, and in time if you are really sincere and in sympathy with the villager you will win his confidence and be allowed to advise and help. Once the villagers have confidence in their advisers they will work and they will pay. But they will not trust those whose object is not the villagers' welfare but their own credit or promotion. The first essential, therefore, whether for official or non-official workers, is sincerity.

As for the order of the work itself, the thing to be done is what the villagers want to do first. It is their village, it is they who

* See chap. xv and appendixes i-v.

† Rural Reconstruction Committee; see p. 179.

‡ See pp. 182, 205.

§ See p. 178.



must work and pay, and so it is they who must chalk out the programme. The social worker's task is to inspire, suggest and stimulate. But until women's education and women's institutes or associations are introduced and some form of village organization is built up, the permanent regeneration of the village has not begun. The village worker must therefore be very careful to learn and to teach his lesson aright so that as early as possible he may be able to lay the real foundations of a better village life.

With Government effort the case is different. Government has other considerations to attend to. It must justify to the public the expenditure of public money. Public contentment means peace and good order, easy economic conditions mean the ready payment of taxes; widespread epidemic diseases and dirty squalid villages are a menace to Government prestige. Quick and simple things like better crops, better cattle, clean villages and epidemic control must therefore find an early place in a Government programme of rural betterment. But the impermanence of all work not based on the improvement of the condition of the women and on village organization applies even more to Government than to private work, as spectacular results in the field of economics or health may lull both Government and public into complacency.

By themselves the increase of wealth and the reduction of mortality, may by leading directly to increased population, merely use up any possibilities of increased resources upon which a higher standard of living might have been based, before the people have begun to desire it.

Sooner or later, therefore, and the sooner the better, Government must set about laying the only genuine foundations of permanent civilization in the shape of women's education, training, and culture, and of village organization. And of course it must insist upon a proper example being set by those who should do so, both official and non-official.

III. THE STANDARD OF LIVING

At the risk of repetition, it must be emphasized that our goal is not economic. It is social—the raising of the whole standard of life.* Economic improvement is a by-product of the urge to social improvement. It is not the stimulus to self-improvement, nor can it be the whole objective of a campaign of Rural Reconstruction. When the people desire a higher standard of existence they will, with the help of Government, work out their own economic salvation. Till then increased income merely means increased population and is an actual danger, as it is using up in advance the possibilities of supporting a higher standard of living that otherwise might have been available when the desire to raise it had at last been created. As the Royal Commission on Agriculture pointed out, it is merely postponing† the effect of the growing pressure of the population on the soil.

In actual practice, particularly where poverty is a serious problem, the best way to the villager's heart is often through some obvious benefit like good seed or good bulls. But these things are only the opening gambit. Our main task is, in the words of the Royal Commission on Agriculture, 'to stimulate the desire for better living.'‡

Once this desire has been stimulated, the villager will want the means to satisfy the needs of his higher standard of living. The economic side of the programme will help to provide them. To quote the Royal Commission again, 'What is required is to increase in desirable directions the number of the villager's wants and to show him how to satisfy them by his own efforts. We trust that the whole weight of those to whom the village looks

As long ago as 1912 His Late Majesty King George V speaking at Calcutta said, 'It is my wish that the homes of my Indian subjects may be brightened and their labour sweetened by the spread of knowledge, with all that follows in its train, a higher level of thought, of comfort and of health.'

† *Report* of the Royal Commission, p. 499, para. 420. This whole paragraph should be carefully studied.

‡ See pp. 1, 5, 122.

for guidance will be thrown into suggestions how to improve, during his spare time, the amenities^a of the village."

The order of events is therefore (i) to attract the villager's attention and gain his confidence by something easy and obvious; (ii) to stimulate the desire for better living; (iii) to show him how to improve his economic condition so that he may satisfy this new desire.

It must not be thought that in stressing the non-material objective of Rural Reconstruction, I wish to deny the existence or the urgency of the problem of poverty. Poverty is there, and plenty of it, and its removal is a vital necessity. But the removal of poverty, as an end in itself, is bound to fail. Nothing impresses one more as one moves about the villages than the very great deal of obviously profitable work waiting to be done and the amount of actual wealth now being wasted. And this indifference to the means of economic improvement is often more obvious in the poorer than in the better-off parts of the province. Poverty is no stimulus to hard work or to thrift. In fact, the greatest progress is being made where poverty is a less serious problem, and more money is being spent by the people on domestic amenities than on wealth-producing activities. But the poor cannot give a lead in thrift and hard work. Rural Reconstruction must begin from the top. Those who are not obsessed with the problem of the next meal, must be given a new pattern of living to work and to save for. Once they set the example the poor will copy them just as they now copy them in waste and idleness. Then and then only will the permanent solution of the problem of poverty begin to be possible. This does not mean that the poor must be neglected. Far from it. Work must go on among all classes but the real objective of better living must never be lost sight of and it must be realized that, urgent though the removal of poverty is, work devoted to this end, unless combined with work for the raising of the standard

of living, can only be a temporary palliative which in the end may lead to even greater poverty.

There is one last point to consider. What about the ever-rising tide of population* which threatens to submerge all our efforts to improve the village? The subject is very difficult but several things may perhaps be said. The birth-rate seems to be very definitely connected with the standard of living. The standard of living† depends less on creature comforts than on imponderables—culture, sweetness and light—and the things that make life more graceful and more gracious. Mere wealth does not necessarily mean a high standard of living any more than poverty necessarily means a low standard. It is the way wealth is used, and not its amount, that determines the standard of living, and it is the outlook and mentality of the people that determines how wealth shall be used. One of the first signs of a rising standard of living is thrift and the accumulation of savings so as to banish the fluctuations of plenty and scarcity, and to secure whatever progress is made. The standard of living—civilization if you like—can be judged by four tests : (i) cleanliness, personal and communal; (ii) the position given to women; (iii) intelligence—including of course co-operation—applied to work ; (iv) the use of spare time and money.

The following things point to a high standard of living : light, air, cleanliness, tidiness in the home; chimneys for the smoke; tasteful pictures and simple and home-made decoration; flowers in the courtyard; clean, well-kept, orderly, healthy, happy children (but not loaded with trinkets); regular well-cooked meals and an orderly home regime; clothes simple and tasteful, not necessarily expensive; decent though simple washing and latrine arrangements; some books, newspapers, medicines, a sewing-machine and usual equipment for making and mending clothes; a hay-box but not dung-cakes, a *kharras* rather than a *chakki* for grinding the corn, a wheelbarrow rather than a basket for carrying rubbish; clean tidy villages, member-

* See p. 123.

† See p. 122.

ship of co-operative cultural and recreational societies, savings bank accounts or insurances, organized games, general literacy all vaccinated and re-vaccinated, a general air of well-being, contentment and intelligent interest in life. All these are marks of a high standard. Expensive clothes, worn untidily and not too clean; bursts of extravagance followed by want; dirty children cluttered with ornaments; quarrelling, discontent, indiscipline, disease; irregular meals, badly cooked ill-balanced diet; lavish display accompanied by squalor and ignorance, illiteracy, the absence of books, pictures, medicines; dark smoky houses; dirty untidy villages; the calling in of a dirty dai (who is only paid a rupee for her work) and the spending of huge sums on fireworks and so on for the birth of a son—all these are marks of a low standard of living.

In the old days life and livelihood were hard and insecure and man was the sport of climate and disease. Nature, ever anxious for the continuity of the species, responded with a high birth-rate; and man, uncertain of the future, took no thought for the morrow and spent as he earned.

Famines and epidemics have now been largely controlled however, agricultural and industrial production have been greatly increased, if only the standard of living can be raised, nature will probably respond to the improved conditions with a decreased birth-rate.

Government's efforts, therefore, must not be confined merely to increasing wealth. The teaching of the best use of money in improving home and health is even more important than the teaching of its acquisition.

A vigorous attack upon the standard of living must, therefore, be the main object of the Rural Reconstruction campaign. In parts of the Punjab where successful co-operative societies, assisted by consolidation of holdings, improved farming and rural industries, have removed insecurity and poverty, the most urgent problem now is to teach the people how to live—how to use their improved resources for the raising of their standard of

living—and of course it can only be solved by educating and training the women.

Whether we believe in birth-control or not for human families (birth-control generally begins when it is least needed and probably creates as many problems as it solves) we must certainly preach and practise the control of the increase of the animal creation—the innumerable and 'uneconomic' cattle that overcrowd and destroy our pastures, and the still more innumerable birds and beasts and insects and pests that share our crops with us and so reduce our livelihood.

CHAPTER IV

CONTRIBUTORS

THERE are many contributors to the prosperity of the countryside.

Providence. This provides the sun, the wind and the rain. We often grumble at Providence but we have absolutely no right or business to do so until we have done everything which brains, muscles, co-operation and capital can possibly do to deserve good health and a good harvest.

Government. This conducts research and disseminates information; it organizes, teaches and inspires, but it cannot either do the actual work or pay for it. These the villager himself must do. Government can design ploughs, evolve new types of seed, and discover the remedies of diseases, but the multiplication of the seed, the buying of the ploughs, and the using of the remedies must be done by the farmers themselves. The most Government can do is to create conditions in which the villager can utilize his money, brains, and labour to the best advantage. ✓ The present policy of Government is to reduce taxation to the minimum, leaving the villager's money in his pocket, for him to spend on what he thinks he needs most. Government tries to teach the villager what he ought to want,

such as good seed, good ploughs, hospitals, schools and trained dais, in preference to litigation and ornaments and expensive wedding parties.

The farmer. By thrift and by hard work both of mind and body, and by joining with his fellows for all his business, the farmer must make the best use of all the other ingredients of rural prosperity. He must take the same pride in his farm and his village as his goodwife does in her home and he must work as hard to improve them as she does to make her home nice.

*His partner.** In countries of smallholders it has been calculated that the housewife is responsible for three-quarters of village life. She holds the purse and keeps the family exchequer solvent. The goodman's main task is to bring home raw produce or money. It is the wife's skill and knowledge that converts them into a well-cooked, tasty and balanced diet and strong cheap clothes, it is she who keeps the children happy and healthy and the home bright. No nation can be prosperous where the homes are squalid or neglected; no home can be healthy, bright and happy where the housewife is ignorant and untrained; and no country can advance faster than its women.

The land. This gets little but abuse, but in fact land is largely what the farmer makes it. There is no commoner complaint than that the fertility of the soil is decreasing, and yet the first duty of the farmer is to maintain and if possible increase the fertility of his land. Poor soil means poor food. The more capital and labour he puts into the land by way of embanking, terracing, draining, ploughing, manuring, harrowing, weeding and watering, the larger and the more certain will be his crops. Land is a national asset and its misuse or slack use is a national sin and helps to increase unemployment.

Cattle. The cattle are as important as the land, for on them the farmer relies both for power and for manure, and his wife for milk and ghee. Good cattle require good food, careful

attention, protection from disease, selective breeding; and a few good cattle are worth many bad ones. Farm horses in England work on the average for twenty years. The average working life of a bullock is probably not more than six years, whereas if it was really well fed all the year round, well kept and fairly treated, it would work for perhaps twice as long. What a saving of capital!

The capitalist. He should devote his capital to the financing of farming and the development of the land and of rural industries. He must discourage all waste and extravagance and refuse to advance an anna for unproductive expenditure. He must nurse the village through bad times and encourage all kinds of thrift, saving and development.

The shopkeeper. He must always look for better seeds and crops and implements and try to push their sale, while for the housewife he must stock household necessities and useful medicines and utensils, and materials which her skill may use to make her home bright.

The artisan. He must learn new and better ways of processing the produce of the farm, so that as little as possible need be dumped raw and unprocessed on the market to the loss of himself and the village. He must learn to do running repairs to the improved implements of the farmer, and some of them he can even make himself, as well as quite a lot of other useful things for home and village.

The village official. Be he doctor, patwari, postmaster, school-master or any other of the many officials who serve the countryside, he must be definitely on the side of the angels. He must discourage quarrelling, faction, lawbreaking, bribery and crime. He must encourage thrift, savings banks, co-operative societies, better seed, better farming, better homes, better games, better everything. He is the villagers' servant,* friend, and adviser, and must go out of his way and work overtime to make the village, and therefore himself and his country, happy and

prosperous. No pains are too great for him to take, and nothing is too much trouble if thereby he can help his master the villager.

The ménial. His position is not too bad in the Punjab and is rapidly improving. He must do his work honestly and well—what is worth doing at all is worth doing well—knowing that this is his best hope of progress and that his future prosperity is bound up with the prosperity of the village. If his task is to keep the village clean, his village must be the pride of the neighbourhood; and if he makes shoes and leather goods they must be the best that skill and good leather can make. He will at least deserve success.

CHAPTER V

HOME AND VILLAGE

I. GENERAL

1. *The Home.** Domestic architecture in the Punjab, whether *kachcha* or *pakka*, is generally very good. In the old villages the houses are often very cramped, but that is inevitable, and the only remedy is to rebuild, which some of the consolidated villages in the Doaba are already seriously contemplating.† In the Canal Colonies, however, where there is plenty of space, the actual housing is all that could be desired.

As a general rule the interior of the home, except where the housewife—as for instance in parts of the south-east of the province—has more than her fair share of field work to do, is kept spotlessly clean and tidy. The walls and floor are leeped at frequent intervals, the pots and pans are all polished till they shine and are arranged in orderly fashion on the walls. There is often much tasteful decoration, and a few bright pictures or bits of coloured paper. The floors are in some parts leeped a

* For blue-prints of plans see p. 300.

† Once people begin to live on their farms there will be more space for those left behind in the old *abadi* to spread themselves.

greenish colour with the help of some vegetable material. Outside too, both on the small raised platform and where the cooking and housework are done, all is spick and span, and much light-coloured clay is used both inside and outside to make the house nice and bright.

The goodwife is hardworking and industrious, with an orderly methodical mind and excellent taste. If only the goodman took the same jealous pride in the rest of the village and worked his farm with the same untiring industry as his wife runs the home, the Punjab would indeed be a paradise!

Where improvement is possible and desirable in the houses of both old and new areas is in the necessities and amenities of the home—in the plumbing department, so to speak.

2. The Village. The streets are usually narrow and crooked, and are often blocked with projections of one kind or another. These defects will be hard to remedy without some organization in the village which commands confidence and respect, and will gradually set back, re-align, and improve, where it cannot entirely rebuild.

The streets must be clean,* and that is difficult without paid workers. This, too, means organization. In fact, no village in the world can be kept permanently fit to live in without a resident administration, call it parish council, panchayat or what you will.† A co-operative society might help, particularly if all or at least a large majority of the householders were members; but in general the panchayat with its statutory powers for finance and sanitation and every other kind of work will probably be the best form of organization.

The area immediately round the outside of the village houses is at present a terrible eyesore. And nothing can be done with it as, whatever its original state, it is now nearly always in the

* Paving is not essential but it is a very popular amenity and is gladly paid for and carried out by villagers as soon as they begin to work for their own improvement. It is one of the first signs of a dawning ambition for better things. See also p. 123.

† See p. 146 and chaps. xi and xii.

possession of various individuals and has ceased to be common land. As a result, only certain people can dig pits for refuse near the village, there is no place for public latrines, no clean space for the little children to play in, no recreation ground for the lads, and no place for any other community purpose. This private possession of the land, however, does not stop all and sundry from dumping rubbish anywhere and everywhere or from using the whole area as a latrine. Foul pools of black mud and water abound. Everything is dirty, untidy, and higgledy-piggledy, and no one can be held responsible. The bigger the village the bigger the horror of it all!

These villages can be cleaned up with a mighty effort by official order or pressure—but they will never stay clean and tidy without (i) a local authority to administer the village and (ii) the 'nationalization', or the reversion to the community, of the area immediately round the houses. This latter means the consolidation of holdings, whereby all this area is reserved both for community purposes, pits, latrines, recreation ground, etc., and for future expansion of the housing area. By a local authority is meant either the Consolidation Society,* the Better Living Society,* or the Statutory Panchayat.† Once consolidation has been carried out, the rest is easy and simple. Orderly rows of pits are dug, the waste water of the well is drained away to trees and vegetable patches, depressions are filled up, the cattle tanks removed to a suitable distance, a recreation ground is provided, and every other village need supplied.

II. WHAT MUST BE DONE

The first three essentials of healthy homes and villages are light, air and cleanliness, and we will take them first, before touching on the many other improvements possible in the village and the home.

See pp. 155, 158-60, and chaps. xi, xii.

† See p. 146.

1. **Light and air.*** More and more windows and ventilators must continue to be opened until air circulates in every room and there is enough light for a mouse to be visible in every corner. I think even smaller things than mice should be visible, but for the present let us be content with that! The Punjab standard ventilator has bars outside, gauze or sparrow-wire† inside, and is fixed just below the roof or ceiling. The sides are extended some inches beyond the ends so that they may be embedded in the walls and give greater security. It has a shade outside, and on the inside the walls on both sides and at the bottom are cut away in a long slope to let in as much light as possible. The top wall is flat. The sloping sides should be whitened with lime wash or white clay to let in more light.

The standard ventilator does not open and shut. We cannot yet trust the goodman and his wife not to keep it always shut if once they can shut it at all; and if properly fitted, with sloping sill inside and the bars outside the gauze, it is difficult to block up. The usual faults are to make the ventilator too small or to cut the walls straight instead of sloping them. Straight walls mean that very little light will come in. People are also very fond of putting the bars inside—they say that, if put outside thieves will use them to pull the ventilator clean out—and then things can be stuffed behind the bars to block the ventilator!

When houses are back to back—this should be avoided in all new buildings—roof ventilators are required, and the simplest form perhaps is the galvanized iron pipe with a cowl on top, both painted white inside to let in more light. Earthenware skylights and plain holes are popular, but these are usually too small and too easily shut and never reopened! In Rohtak and elsewhere a big square skylight covered with an iron grid is common in their deep pillared rooms. These are excellent, but even so the back room still requires a ventilator. Windows

See pp. 290 (2), 294 (6), 300 (5-9).

† Sparrow-wire is better as this lets out insects which have found their way in by the door.

are common, but unless they face the courtyard they are apt to remain shuttered and are rarely* a good substitute for the clerestory ever-open ventilators. For the well-to-do, a glazed and hinged window is suggested, with fixed bars and gauze.*

The objections to ventilators are the fear of thieves and the hatred of cold. As for thieves, if every house is ventilated all are equally vulnerable and the number of thieves or their average income will not increase on account of ventilators! Besides does not the villager protest that there is nothing in his house nowadays worth stealing?

As for cold, sheep abound and there is plenty of spare time to weave woollen cloth† and blankets as the men of Kulu do. Some of the many ear-rings still common on men and children alike might be exchanged for warm coverings.‡ Tuberculosis and cerebrospinal meningitis are an ever-present menace, and whatever the objections may be, it is a plain fact that for health and for freshness, both of body and brain, light and air are absolutely essential. Without them neither mind nor hand will work really well, and therefore they are one of the pre-requisites of the better village life, and no argument against them can be considered.

2. Cleanliness. Cleanliness can be divided into four categories:

- (i) Personal cleanliness
- (ii) Waste, rubbish, refuse and dirt of all sorts
- (iii) The proper disposal of waste water
- (iv) Latrines

(i) *Personal cleanliness.* Daily washing, particularly of children, and the regular washing of clothes, are essential, but we need not dilate on it. Soap is easy to make and soap-making is taught in many schools. For the importance of keeping eyes clean see pp.110-13. Whatever other chores are given to the women to

* In addition to the ventilator, of course, not a substitute for it.

† See pp. 238-40.

‡ See p. 107.

do and whatever help they give in farming, industry, and cattle-keeping they *must* be left sufficient time to look after their children properly.

(ii) *Waste, rubbish, refuse, etc.* Pits are the beginning and end of this part of the problem, and into them must go everything, absolutely everything, in the way of rubbish, refuse, waste and dirt from house, kitchen, compound, stable and street. There are two kinds of pits:

(a) the compost pit,

(b) the collecting pit.

The compost pit is dealt with in the next chapter.

The collecting pit is, as its name suggests, just a rubbish dump. When full, it must be covered with several inches of earth and left to rot. If water is added occasionally the contents will rot quicker and so be ready sooner for the fields. To find out whether water is wanted, grub a hole a foot deep in the manure. If it is not really hot and damp, give the whole pit a good sprinkling of water.

Its depth. Manure rots quickest and best when air can get at it—aerobic action, this is called. Research has shown that a slowly filling six-foot pit gets all the aerobic action necessary for the production of good manure before the refuse is buried too deep for aerobic action to continue. From the health point of view the smaller the surface of rubbish exposed to the wind and the lies the better, and this means deeper pits. Besides, land is very scarce round many villages and the deeper the pit the smaller the area required. Collecting pits therefore should be six feet deep.

Its position. Another question is where to dig pits. The nearer the pits are to the houses and stables, the more likely are they to attract the rubbish and refuse. The farther away they are the more likely are people to throw their rubbish down before they reach them. As long as pits do not contain night-soil they will not cause much offence to health, and so the rule is to dig the

* See pp. 59, 290 (1).

pit as far away as possible but not so far away that anybody is tempted to dump his stuff before he reaches the pit. In many villages land cannot be found for pits until consolidation of holdings is carried out (see pp. 52-53). A solution found in some places is to arrange land on lease (for cash or a portion of the manure) for pit-digging. The revenue staff can usually arrange something if the village is really anxious to improve itself.

In digging and using pits the following instructions must be carefully followed:

(a) Never take manure out of a pit until it is thoroughly rotted (see p. 60). This means that every cultivator must have at least two pits, one rotting and one filling.

(b) If the water level is very high or the ground is stony, then an enclosure is as good as a pit.

(c) To keep out donkeys and pigs and other animals and to prevent children playing in them there should be a low earth wall round them, particularly towards the village, to ensure that rubbish shall be thrown clean into the pit and not piled on the edge. These walls, and in sandy soil, the sides of the pit as well, should be leaped at regular intervals. If necessary protect pits with thorns.

(d) There should be steps or a slope at one end to enable the refuse to be removed when ready for the fields.

(e) If pits are occasionally watered, their contents will rot more quickly.

(f) The pit should never be dug inside the *ahata*.* This is done in some Canal Colonies, but it should be discouraged as without very intense supervision it is sure to be a cause of offence.

(g) The length and breadth of pits depend upon the amount of rubbish and dung likely to be deposited in them, but if they are to be screened off and used as latrines they must not be too wide for whatever footboards are available. The rubbish pit is by no means an ideal latrine but it is better than no latrine at all.† If so used, it must have a screen round it for decency

The small compound of a village house.

† See p. 34.

and planks or logs across it to squat on. A few handfuls of earth should always be thrown in after use, and the day's rubbish and sweepings should be carefully thrown under the foot-planks, and these planks moved along the pit as it fills up.

As pits are an agricultural as well as a sanitary necessity, they are again dealt with in connexion with the farm (see p. 59). For fuller particulars see the *Pit Pamphlet*.*

(iii) *Disposal of waste water.* This is one of the biggest problems of village sanitation, whether the water comes from the house or from the well. Hand-pumps are very popular in the villages and very numerous, but without some arrangement for absorbing their waste water they will only spread dirt and smell and possibly malaria too. Waste water from wells generally works its foul way down the village streets to a still fouler pond. The pond is itself another problem, however, and will not solve the well problem.

Waste water must be carried away in *pakka* drains. Drains must have a 'U-shaped or semi-circular section. A drain of right-angled section made of ordinary bricks will never be clean. This U-shape can either be got by a cement plaster on the bricks, or by using half-pipe concrete drains or special drain-bricks. Drain-bricks† have a semi-circular trough in them and must be specially moulded and burnt. In Hoshiarpur district underground drains of concrete pipes with open joints are very successful where the subsoil is sandy.

It is suggested that if properly screened washing places‡ were built on the wells and the women washed themselves, their clothes and their children there, less water would have to be taken to the houses and so there would be less waste water to dispose of and no house drains need be made at all. This is being tried in various places. On the Skinner Estate near Palwal a purdah wall has been built all round the well, but the usual washing place is an oblong structure, often with a water-pipe running into it

* See pp. 290 (1), 300 (11).

* See p. 301 (14).

† See p. 300 (3).

from the well. At Khanewal on the B.C.G.A. Farm, a purdah bathing ghat has been built on the canal channel just outside the village.

The best use for waste water is to grow something useful. I have seen this device in a Salvation Army Brigadier's house at Batala. He dug a big trench in his backyard—which was no bigger than the ordinary village householder's—refilled it with soil and manure and planted it with grape vines which he trained to make a roof for his veranda—leafless and sunny in winter, cool and shady in summer, with scores of bunches of lovely grapes! This absorbed all the waste water of a small hand-pump. Obviously grape vines, a flower or vegetable patch, a row of papayas, bananas, or trees of some sort could easily absorb all the waste water not only of a house, but also of a village well or of a mosque. The more the waste water the bigger the plantation and the more the shade, the profit and the beauty. All waste water from the houses or from the well (including any washing places or water-troughs or other conveniences), must run together in a *pakka* drain to the nearest space where these things can be grown.

Soak-pits,* unless really big and deep and well constructed, are rarely satisfactory, and undoubtedly the use of all waste water for the growing of trees and vegetables is the best possible solution of the problem. There is enough waste water in India to grow vegetables and fruit for many millions of people.

(iv) *Latrines*.† The villager fights shy of latrines, probably because until recently the only design of latrine known was the (pan) type, a very smelly affair which depended on constant and conscientious 'service' to be at all usable. There are other and far better kinds, however, and the use of latrines should be put very high in any rural programme, for the following reasons:

(1) Women suffer incredibly from the absence of latrines.

* In sandy soil and at a good distance from wells and pumps a bored-hole of the kind drilled for latrines would be worth trying.

† See pp. 105-6.

They must either wait till nightfall—at the expense of their health—or search for some privacy near the village by day.

(2) Children cannot be taught clean habits, self-control, and self-respect without sanitary appliances, however simple, and until these virtues are taught most of the village problems will remain unsolved.

(3) As will be seen in the next chapters the promiscuous use of the area round the village as a latrine is definitely bad farming.

(4) The use of latrines means a great rise in the standard of living, brings respect and self-respect to the villagers, and is a valuable social discipline.

(5) Hookworm, a very common disease, which utterly destroys health and efficiency, will disappear as soon as latrines come into regular use.

(6) For general health, convenience, decency, and reduction of flies and smell, latrines are essential.

Not much has yet been done to design latrines for village use. Flush latrines connected with septic tanks are far easier and cheaper to make than most people imagine and should be installed wherever possible by better-to-do villagers. For the rest some kind of hole in the ground must be the basis of the latrine and to combine good health and good farming it must fulfil five conditions. It must not (a) breed flies, (b) contaminate the water supply, (c) offend the nose, or (d) require service. (e) Its contents, liquid and solid, must not be lost to the farmer but when properly decomposed and ready for the land, it must be possible to transport them to the fields.

There are four possibilities: (1) the well-known bored-hole latrine. This is disliked by some health experts for fear of its contaminating the water supply, and for the farmer it means the loss of the whole of the urine and most of the rest of its contents. They are probably quite safe when the subsoil water is twenty-five feet below ground level and there are no wells or pumps within a hundred feet or even less.

(2) The pit-latrine, often used by the Army, is perhaps the ideal village latrine. This is merely a pit some eight or ten feet deep with a floor on top and one or more oblong holes in the floor with lids to keep flies out. Each hole is screened to make a separate latrine.

These pits can be small ones for a single latrine, a long pit for as many latrines as required, or a round well-like pit divided by walls into four compartments.

(3) The ordinary manure pit, with planks or logs put across and a screen round it. This is perhaps the least satisfactory and will not be acceptable to the cultivators until they are convinced that everything turns to odourless black earth and therefore no social stigma attaches to the handling of it once it is fully rotted. This pit must never be used as a latrine unless it is a good distance, (fifty yards at least), from the houses. A pit used as a latrine must of course be covered up with earth when full and never emptied until all its contents have completely decomposed.*

(4) Shallow trenches in the fields—say one foot deep—filled up as used each day. Quite satisfactory as long as they are properly looked after, and excellent for the crops.

None of these four kinds of latrines requires any servicing that cannot be done by the users themselves. The top and squatting place of the bored-hole and the pit-latrine must be raised to keep out rain-water and of course must be kept clean. If much water gets into the quail pit, it may need a bucket full of horse-dung to prevent it giving offence. Squatting-slabs† for bored-holes must be carefully designed. They should be made of reinforced concrete, well sloped towards the centre, with a raised bit each side of the hole to show where the feet should be placed. The hole should not be too wide, but at least fifteen inches from front to back for adults, and well cut back underneath to prevent it being fouled. A bar across the centre will give confidence to

See p. 32 (g).

† See P. 300 (10).

children.* Single-seat pit-latrines dug in hard soil can be shaped like a jar with a neck small enough for the use of a cement concrete slab on top.

There is no objection to having latrines in the compounds of village houses if there is no pump or well near by, the compound is big enough, the top of the latrine is kept clean and the lid is kept closed (these conditions are far more likely to be fulfilled when the latrine belongs only to one household).

The worst form of latrine is the 'pan' latrine. It requires constant attention and servicing by a special class of 'untouchables', whose elevation to full participation in the rights of humanity will have to be postponed until this 'inhuman' type of latrine is abolished, along with the 'thunderbox' type still popular in official and middle-class circles. It is unthinkable that the carrying of crude faeces should continue for a day longer than possible to be the hereditary duty of a particular class of human being, or should be necessary for any human being at all; except in exceptional cases, such as sickness.

This last type should be replaced as quickly as possible by flush latrines and septic tanks and Government should set the example. Those who tour with tents should dig shallow pit-latrines for their servants and for all who come to their camps on business, while in their own tents they should have a small pit over which a proper seat or 'squat' is fitted. The progress of civilization is being definitely held up by the present custom of either using no latrine or the wrong type of latrine. The designing and popularizing of the proper types for each kind of locality and people is one of the most urgent reforms waiting to be carried out and it is the duty of Government and of all social leaders and workers and reformers to set about this task at once.

Even military service does not make men, who were brought

* In Hoshiarpur District, through the initiative of the District Medical Officer of Health—Rai Sahib Dr Harnath Singh—all manner of village necessities, such as wall and roof ventilators, drain pipes, latrine squats, etc., used to be made in cement concrete at extremely cheap prices.

up without latrines, insist upon having them when they return from the Army and settle down again in the village. The obvious place, therefore, to start teaching the use of latrines is the school and the college and yet one is continually finding schools—and sometimes even colleges—with entirely inadequate or unsuitable arrangements, occasionally none at all!

3. Wells. So much for the main part of cleanliness. A great deal, however, both of comfort and cleanliness depends upon two other things, wells and ponds. There is no reason why the villager should not get pure water, but he very rarely does, because for want of simple precautions he allows all his wells to be contaminated. For well water to be pure, six things are wanted:

(i) A roof to keep out leaves, bird-droppings and a lot of dust. This is less essential than the other things, but when spending many hundreds of rupees on a good well, why not make a job of it and add a roof? Even better than a roof is the complete sealing of the well and the extracting of the water by means of a pump or a Persian Wheel (worked by hand or by bullock power).

(ii) A properly built platform with a raised and outward-sloping inner lip, so that pots and buckets cannot be put on the edge of the cylinder and water will not splash back into the well from the platform.

(iii) A masonry or hardened walk round the well below the platform or cylinder top, both for the convenience of the women and to prevent dirty water collecting in puddles and soaking down into the subsoil water.

(iv) A masonry drain round the well to collect all waste water from the walk and from the platform and take it away—not to a pond or bog but to a garden or a series of trees, vines, papayas, bananas, etc., big enough to absorb the whole output.

(v) A pump or Persian Wheel or, failing one of these, a drum or windlass round which the bucket rope is wound, so that the rope may never lie on the ground or even on the well platform and get dirty.

(vi) A common bucket. No one should be allowed to put his own vessel into a public well.

Other good arrangements are masonry or iron tanks fitted with taps* and filled from the well by Persian Wheels or other water lifts.

There are many ways of making the drawing of water easy and pleasant, but whatever is done the essentials must be observed by which the water in the well is kept absolutely pure. No dirt must be allowed to get in either (a) from the air, (b) from the bucket, rope, or pump by which water is lifted, or (c) through water getting back into the well either from the platform or by seeping down through the soil round the well.

4. The Village Pond. The ponds and depressions round the village are perhaps the biggest problem of all. People dig, did, dig, to build and to mend their houses and walls. The older the village the worse it gets, until the place becomes an island! There is no place for the cattle to stand, for the children to play, for pits to be dug or for the village to expand. In villages where the *shamilat*† land has been divided up and these depressions come into private hands, some of them may get filled up, but this disappearance of common land produces other problems, and makes manure pits and the provision of community needs impossible. Consolidation of holdings is the only real remedy for this pond problem. The committee of the Co-operative Consolidation Society‡ reserves a sufficient area round the village for all needs; ponds§ and depressions among or near the houses are then filled up, and a sufficient number of ponds are dug at a proper distance from the village. Earth for filling them comes from the new ponds, from any high ground, old kilns, and other mounds within reach, or, if finally necessary, from the fields. A few furlongs of light railway track and a dozen tip-wagons

* A wooden cock is better than a tap as children are apt to spoil taps.

† Common land.

‡ See pp. 155, 160.

§ The site of an old pond adjoining a village is generally very valuable and much coveted and the man to whom it is allotted is willing to spend much money and effort in levelling it and making it fit for cultivation.

would make pond filling a much less arduous business, in villages where earth has to be brought from far away.

One way of getting rid of a depression is to put a small bank round it to keep out rain-water, and then, when it dries up, to level it and use it as a playing-field. This has been done very successfully at Clarkabad, a Christian village in Lahore District, and for a village school in Hoshiarpur District. A depression can also be divided up into pits, sufficient earth only being dug out of each pit to build walls and roads up to the old ground level. A depression need not of course remain a permanent pond if it is banked all round to keep out all water except the rain which actually falls on the depression itself.

When the ponds are dealt with by a Co-operative Consolidation Society, every other possible need of the village is dealt with. The stimulus given to corporate effort by the success of the Consolidation Society carries the people through every kind of difficulty. Everything else is a molehill to the mountain of scattered holdings, and if a co-operative society can overcome that, what cannot it do? And so they make a clean sweep of all their troubles and problems.

We too will take them one by one but we have not finished with the ponds yet. Houses will still need clay for repairs even after the new ponds have been dug and the old depressions filled. The first thing necessary is for the engineers to find some means of weather-proofing *kachcha* walls. If the length of life of the *kachcha* wall can be doubled, digging will be automatically halved. A cement wash has been recommended as satisfactory and whitewash followed by a sodium silicate spray is being tried out. Bitumen has been tried, but not yet successfully. There is obvious scope for research here, as clay-digging is one of the biggest problems of the village. The next thing is to control the digging. The counsel of perfection would be for people to fetch clay either from their fields or from a common quarry far away from the village, but human nature being what it is and most of the work of fetching clay devolving on the overworked women,

we must look for something easier. The following experiment is worth trying. Divide every pond site into two halves, separated by a bank with a masonry waterway in the middle. Let one half be used as a pond, while all digging is done in the other half. When enough digging has been done, open the waterway, transfer the water, and use the dug-up half as a water tank, and the other for digging, repeating the process whenever necessary.* This may or may not solve the problem but it is worth trying and is being tried on the Ingram-Skinner Estate near Palwal. In any case digging should never be promiscuous. The village committee must allot and mark off the area within which digging is to be done and allow it nowhere else. Digging must be deep and concentrated, not shallow and widespread.

Ponds must get their water from the jungle or from fields and not from the village site, as, however clean the village is, its water will always be dirty. Ponds must therefore be embanked against the village, and their inlets must be on the sides away from the village. Let the run-off of the village go into the fields or into a special drain, but not into the cattle ponds nor along the roads. The 'dual-purpose pond' for sewage disposal and cattle-drinking and other village needs is definitely bad!

5. Miscellaneous. (i) **THE VILLAGE.** Before we return to the home, we will finish off the necessities and amenities of the village in general.

(a) All such things as kilns, tanning-yards, bone depots, graveyards, and burning ghats should be moved well away from the village, and hemp should be steeped as far away as possible in a special pond used for no other purpose.

(b) A recreation ground is essential. The more vigorous and healthy the village boys and young men, the more certainly will they get into mischief if they do not play games—and let them be good rough games, such as *kabaddi*, football, *pirkandi*, net-ball, hockey or rugger-touch.

* See p. 300 (12).

(c) *Village roads.** Landholders on both sides of the village roads encroach on them until one cart, let alone two, can hardly pass, and they dig earth out of the roads to mend their field banks. The roads become drains in the wet weather, steadily scouring down below the level of the fields and, in wet weather are useless for all wheeled traffic. Village roads must be straight, wide enough for two-way cart traffic and raised a foot above the level of the fields. Wherever canal or well water courses cross roads proper culverts are essential, to make traffic easy and to prevent flooding and waste of water. Field owners must never be allowed to dig earth from the roads to mend their banks. Roads must never be drains, and any drains necessary must be specially provided for the purpose. Where the road is well below field-level, it may be better to leave it as a drain and make a new road. This can easily be done when the holdings are consolidated.

(d) Roadside villages are a very special problem. A lot of earth has usually been dug away to raise the road, the village has no exit for drainage water towards the road, and there is usually a peculiarly foul no-man's-land between road and village, which gives Government and village alike a bad name. The only cure is for the road engineer, the health officer, the executive officer, and the villager to get together and work out a remedy for the peculiar circumstances of each village.

(e) *Village planning.* All the new canal colony villages are built to carefully prepared plans, but very rarely does one get a chance of planning a new village elsewhere. When one does, the first thing to avoid is trying to plant a sealed-type plan upon the people. The locality must be very carefully studied, prevailing wind (for kilns and other things that smell or smoke or raise dust), the trend of the subsoil water (for latrines and wells), the slope of the land (for drains and ponds), etc. Too many

* The rubber-tyred cart is far the best for the bullock, for his owner and for the road, whether *kachcha* or *pakka*. But the pioneering must be done by Government and local bodies for the carting of their own material whether for roads, buildings or sanitation.

roads and too wide roads inside the village are a nuisance when it comes to lighting, draining, watering, paving or cleaning. Back-to-back compounds are desirable but not back-to-back houses. The road scheme cannot be cut and dried. Draw lines from the principal traffic points, bridges, level crossings, villages, main roads, and where they meet is the centre of the village. Make ample allowance for all community needs, ponds, recreation grounds (for lads as well as for women and small children), wells, religious buildings, shops, meeting-houses, latrines, pits, burial and cremation, potters and other artisans, etc. A circular road is essential and the pits must be outside it. Roads outside the village should be wide enough for two lines of traffic, for the borrow-pits (from which they are raised high enough to ensure that they shall never be drains or pools instead of roads) and for the boundary banks of the fields.

All this work can easily be done at consolidation time, but realignment of roads and provision of drains is difficult if not impossible at any other. Keeping village roads in order by regular work is essentially a job for the villagers to do themselves. If Government and District Board do it, it will cost vast sums. The villagers, if organized—and without organization nothing good can ever be done—can do it in their spare time at no cost whatever, and then Government and District Board will have more money for things which the villagers cannot be expected to provide themselves.

In modern Turkey every able-bodied man below 40 years of age—except serving soldiers—has to give six days' work twice a year to the roads or pay for a substitute to do his share of work for him. An excellent law which should be copied in India where labour is plentiful and money is scarce.

(ii) THE HOME. Let us return to the home and finish it off. Having settled the essentials of light and air and cleanliness and some of the necessities of community life, let us consider several little ways of brightening the home.

The designing of necessities and amenities for the village home

offers a wonderful opportunity for practical service, particularly to engineers, and it is to be hoped that more attention will in future be paid to the needs and comforts of more than three-quarters of the population of India.

(a) *Cooking arrangements.* The kitchen should if possible be a separate room or lean-to. Failing that the cooking should be done outside, and never in the sleeping room.

In all cases chimneys are absolutely essential, both for comfort and convenience, and to save the eyes. Why blacken walls, beams and ceilings when with a little effort and ingenuity all the smoke can be taken away in a chimney?

I cannot help thinking that it would be less dusty and more comfortable if the work connected with cooking were done on a raised earthen counter or bench two and a half feet high instead of at ground level. To work doubled up on the ground is bad for the body and bad for the work. For health, ease and efficiency all work, whether in wood, iron, leather and anything else should be done on benches not on the ground, and cooking is no exception. These are details, however, that no one but villagers themselves can decide, and they will doubtless do so when once they begin using their brains to think out little ways of making their homes nicer.

(b) *Drudgery.* Every effort must be made to reduce the drudgery which now burdens the housewife, and wastes valuable time which might be better spent on looking after and training her children, making and mending clothes, and brightening the home. For instance the *chakki*, the hand-mill, must give way to the *kharas*, the bullock-driven mill, and the hay-box* must reduce the amount of dung-cakes required as fuel. For the removal of rubbish, a wheel-barrow is far cleaner and quicker than a basket carried on the head, but a good design is still wanted, which can be copied by village craftsmen from materials easily obtainable in the village.

(c) *Nets.* Many village mothers are ready to buy little nets

for their babies, not to keep off mosquitoes—that will come in time—but to keep off flies while they are sleeping during the day so that they may sleep in the fresh air and not in a dark stuffy interior or under a cloth. These nets can be had from the industrial co-operative societies.

(d) *Flowers*.* There is no reason why every village home should not have its little flower patch, however small. The world is full of lovely flowers and is a brighter place for them. Fancy hollyhocks, verbenas, larkspur, and all the rest, one or all of them, in every village home! The village is a drab place and flowers would make a wonderful difference. Our urban friends can do a little social service by making up packets of seeds with simply written instructions for distribution in the villages.

(e) Now that light is coming into the insides of the homes, coloured pictures† are much needed for the walls and many villagers are ready to pay a small price for them. They must be bright and they must be really artistic and tasteful. The same need arose in England in the last century, when light and air began to be brought into the cottages, and it was supplied in part at least by religious and philanthropic societies. The Bible pictures and illuminated texts so common in English villages, show what good use was made of the opportunity. What a chance to provide good cheap pictures for the Punjab villager, each picture containing some hint of the bright homes and smiling villagers we want to see!

(f) *The Magic Bhoosa-box*.‡ In most places in India there is very little fuel, and cow-dung has to be burnt instead of wood or coal. In some places cattle are specially kept, so that their dung may be used as fuel.§ These cattle, of course, prevent more trees from growing, and so help to keep the hills bare, and thereby

* See p. 131.

† See p. 207.

‡ *Bhoosa* is chopped straw (produced by thrashing with oxen). In countries which have no *bhoosa*, hay is used for this business of 'cooking without fire' and the box is therefore called the hay-box and has been known for centuries. *Bhoosa* is as good as, or better than, hay for this purpose.

§ See p. 86.

make sure both that the fuel shortage shall never be cured, and also that more and more of the fertile topsoil of the hills shall be washed away by the rain. Even where there is plenty of fuel, cow-dung is often preferred as a slow fire for cooking, and to keep things hot for a long time.

Cow-dung is the best natural fertilizer of the soil and to burn it as fuel is to kill the goose that lays the golden egg. Cow-dung is the food of the land, and without it the soil becomes weaker and weaker, instead of stronger and stronger, and the crops get worse every year instead of better.

The burning of cow-dung is one of the reasons why the average crop yields of India are so low, compared with other countries where cow-dung is used only as manure and never as fuel. In England, cow-dung used to be burned as fuel in the old days, but when the rural leaders started to discover new and better ways of farming, they used to make it a condition of farm leases that all cow-dung should be used as manure, and not burnt as fuel. The discovery of coal made it far more easy in England than it is for us in India to stop the use of cow-dung as fuel.

As perhaps the main use of cow-dung as fuel is to keep things hot, there is one way by which we can rescue vast quantities of cow-dung for its proper use as manure, and that is by using the *bhoosa*-box. Just as a thermos flask will keep hot things hot, and cold things cold, so will *bhoosa*.

When villagers buy ice in the town for a wedding, they keep it from melting by burying it in *bhoosa*. In the same way, things can also be kept hot by burying them in *bhoosa*. In particular, milk, *binola* (cotton seed), *gawar*, and *dal* (pulses) can be kept simmering in this way. Those who want hot water in the early morning can heat it overnight and leave the *degchi* buried in *bhoosa* till the morning, thereby saving the trouble of getting up so much earlier to light the fire and heat the water.

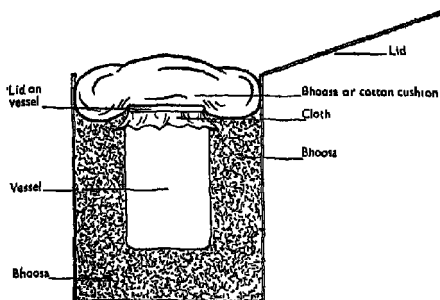
Here is how to make and use a *bhoosa*-box:

1. A hole in the ground is the easiest *bhoosa*-box, but the labour of lifting a heavy pot from below the ground is great. A clay

tub or the old *hara** can be used, or a wooden box. Perhaps the best of all would be a built-up solid brick and clay tub above ground level.

2. Before burying in *bhoosa*, the food, water, milk or whatever has to be cooked or kept hot must, of course, be brought to the boil on an ordinary fire.

3. It must then be carefully covered up with a cloth, as well as a lid, to keep out the dust.



4. See that there are no hot cinders sticking to the bottom of the pot.

5. Bury the pot deep in the *bhoosa*; the more *bhoosa* all round, underneath and on top the better. Six inches must be the minimum. The *bhoosa* must not be loose, but fairly tightly packed.

6. The less air in the pot, the hotter will the pot remain. The pot must, therefore, be as nearly full as possible, and the air space must not be needlessly increased by using a pot or saucer turned upside down as a lid.

7. Instead of having loose *bhoosa* on top of the pot, use a cushion loosely stuffed with *bhoosa*. A cushion of cotton may also be used, and has the advantage of containing no dust. Use

* The clay tub in which milk is simmered over a cow-dung fire.

good cloth not muslin or gunny for making the outside cover of the cushion.

8. If you continually open the *bhoosa*-box, heat will soon be lost. If you want to get milk or water from time to time from the pot, have two *bhoosa*-boxes, one for use during the day, and one to keep hot all day.



9. The bigger the quantity kept hot in one pot, the longer will it stay hot. Small pots do not keep so hot as big ones.



10. The usual shape of pots makes it necessary to pack a new *bhoosa* nest every time the pot is put in. For *bhoosa*-boxes, pots with straight sides like cans or jars would be better.

11. The *bhoosa*-box must have a lid and the lid, whether of wood, brick, or clay, must fit closely.

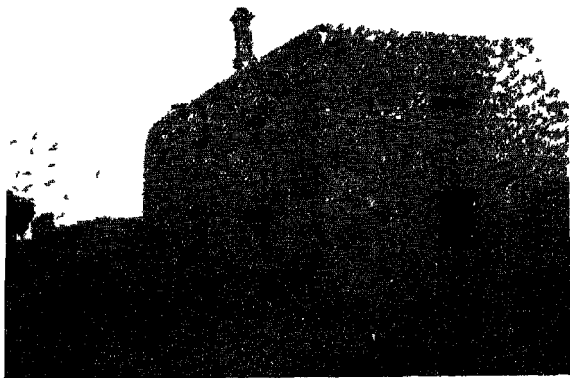
COMMON MISTAKES. The commonest mistakes in using a *bhoosa*-box are (a) the tub or box or *hara* is too small, and so the *bhoosa* is less than the minimum of six inches thick, above, below, and all round; (b) the pots are only half-filled; (c) inverted saucers or pots are used as lids; (d) the top of the pot is left uncovered or not sufficiently covered with *bhoosa*; (e) the lid of the *bhoosa*-box is too big or too small and does not fit properly.

Milk. 1. The use of a *bhoosa*-box for milk has been carefully tested at the Imperial Institute of Dairying, at Bangalore, and it has been proved to be far the best of all village methods of making ghee.

2. After keeping the morning milk all day in the *bhoosa*-box, the evening milk can be added to it in just the same way as is done when a cow-dung fire is used.

3. The advantages are as follows:—

- (i) More ghee and cleaner ghee. For every seer of ghee made with a *bhoosa*-box you will get between one and two chattraks more ghee than with a cow-dung fire.
- (ii) The food values of the ghee, *dahi*, and *lassi* will be



A WELL-VENTILATED HOUSE

The drain outside has a culvert over it (See p 30)

THE PROPER WELL

It has been covered up the water is lifted by a Persian wheel and carried in pipes and taps for drinking washing and to cattle troughs (See p 38)





Copyright W. W. Woo

ORNAMENTAL DECORATION ON THE OUTSIDE OF A HOUSE



THE NEW ORDE
IN THE HOUS
Note the mosquit
net, the light ar
air and the gene
tidiness and clean
ness. (See p 45)

greater,* as there will be no burning of the milk in the *bhoosa*-box.

- (iii) The taste will be pure ghee, pure *dahi* and pure *lassi*. Unfortunately, this will be for the first few days a definite disadvantage; people accustomed to the aroma of smoke and cow-dung will think pure *lassi* rather tasteless until they get used to it.

WARNING. For some reason at present unknown, milk very often goes bad in summer in a *bhoosa*-box. Do not therefore use a *bhoosa*-box for milk in the summer, unless you can open it occasionally, and if necessary take the milk out of the *bhoosa*-box and boil it up again to prevent it going bad.

Other advantages of *bhoosa*-boxes for all purposes are:

1. Less smoke in the *ahata* (compound).
2. Less danger of fire from the cow-dung tub (*hara*) being knocked over while the housewife is away.
3. Fewer accidents to children from burning.
4. The housewife will be saved from the waste of time and the dirty drudgery of dung-cake making.
5. Everything in the *bhoosa*-box is safe from cats, dogs and any other animal, and also from being knocked over.
6. A great saving of trouble and a definitely better way of keeping anything which requires to be kept hot, and of cooking anything that takes a long time to cook or has to be cooked slowly.
7. Hot water in the morning without getting up early to make a fire and boil it.
8. More manure, and therefore better crops, bigger incomes, better fed cattle, and so healthier and happier children and grown-ups.

A *bhoosa*-box will keep milk or water so hot that if put in boiling they will still be too hot to drink six hours later. It has been found that in a good *bhoosa*-box, kept exactly as shown above, the temperature only dropped about five degrees Fahrenheit every hour.

As I mentioned before, India has probably less fuel than any other country, and therefore it is every man's duty to do whatever is possible to save fuel and to avoid using fuel when it is not absolutely necessary. The *bhoosa*-box is one way of doing this. An improved *chula* (grate) would be another way. The ordinary *chula* wastes most of the heat of the fuel it burns, but no one bothers to make experiments and to try to design a *chula* which will make better use of its fuel.

For keeping water hot, it would be quite possible to pack *bhoosa* round a tank with a tap to it. By using the sun to warm the water and then putting it in a *bhoosa*-tank it would be possible to get warm, but not very hot, water most times of the year without any fuel at all !

Welfare workers have been teaching the use of the *bhoosa*-box for some years, but it is not popular. Why ? Because (a) it is something new; (b) it is against custom; (c) it is a great bother to do anything new, to learn to make a new thing work, and either to fit it into the daily routine or to change the daily routine to fit in the new thing; (d) the men object to the taste of *bhoosa*-box *lassi* and *dahi* because they are used to them tasting of smoke and cow-dung.

But the men have absorbed the cigarette and the bicycle, and fitted them into their lives ! Let them now try and absorb the more valuable *bhoosa*-box and help the housewife to fit it into her life.

The universal use of the hay-box will increase the manure supply by millions of tons, will save the hard-worked housewife from a dirty bit of drudgery, will eliminate a lot of smoke and the cause, particularly in the hot weather, of many village fires. It is in fact a social and agricultural reform of the very greatest importance.

As for fuel for other cooking, the method of cooking at present usual in villages is extremely wasteful. The ordinary *chula* (grate) besides wasting most of the heat of the fire, only holds one pot. One pot, one *chula* ! New *chulas* (grates) must be

designed which, besides using as much as possible of the heat produced by the fuel, will enable all or as much as possible of the cooking to be done on one fire. The Agricultural Institute at Allahabad has designed a cooker with an oven on one side, a water boiler on the other, and spaces for several pots on top. It is made of clay with iron dampers to send the heat and smoke where desired and could be copied in any village.

But fuel is still wanted and where is it to be got? In China, every bit of vegetable waste is collected and preserved either for fuel or manure, and this must be done here too. The villager wastes, by burning in a bonfire or by just leaving it where it is, large quantities of refuse both in the fields and in and round the village. All this must be carefully collected and either put in the pit or husbanded for fuel. Grass, tree loppings, weeds, leaves, cotton-stalks, crop-refuse after cutting or thrashing, hard bits of fodder, old straw and thatch—nothing must be wasted. The hard-working Chinese sow alternate plants of millet and soya beans, top dress them by hand, and, after the leaves have been stripped off the millet at the right time and dried for fodder, the huge coarse stalks make excellent fuel. Even the stubble is pulled out of the ground and used for fuel or compost in China.* If the Punjab villager only put his mind to it, he could find or grow a very great deal of fuel and so save his cow-dung for its proper use as manure. Without a panchayat in the village, however, the roadsides, hillsides, waste places and common lands will never be put to their proper use to grow timber and fuel.†

Much designing and experimenting is required to improve the village home, latrines, *chulas*, chimneys, wheelbarrows, washing places—everything needs to be made more efficient and more comfortable. To do this prizes must be offered and 'Better Homes' exhibitions held every year.

See *Pit Pamphlet*, p. 290 (1).

† See p. 86.

CHAPTER VI

THE FARM

THE best way of raising crops differs from district to district, almost from field to field, but there are certain things as necessary for farming everywhere as bats and ball are for a game of cricket, and anyone trying to grow crops without them has no right to be called a farmer.

Some of these things are:

1. Capital. 2. Land. 3. Water. 4. Manure. 5. Good seed.
6. Strong cattle. 7. Proper implements. 8. Common sense and hard work. 9. Attention to crop disease and pests.

1. **Capital.** This is so important that it gets a separate chapter (see p. 220).

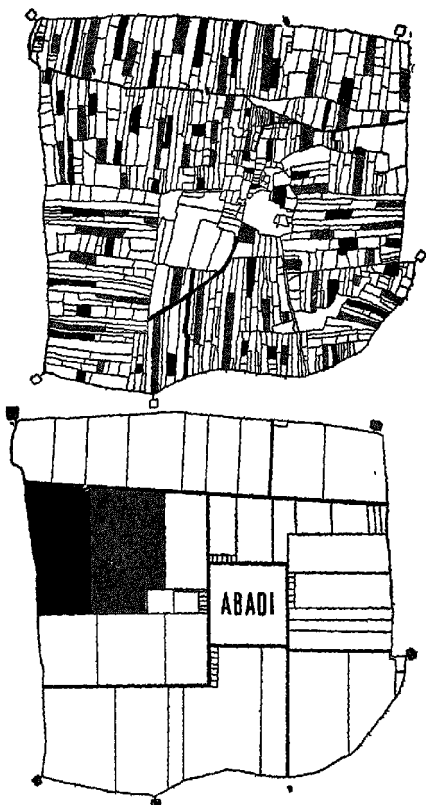
2. **Land.** The first requirement of land is that it be in a compact block. It is impossible to farm properly small fields scattered all over the area of the village, and yet this is what most Punjabi villagers outside the Canal Colonies are trying to do.

Consolidation of holdings is therefore the first necessity of good farming. The Co-operative Department* (and in certain districts the Revenue Department) deals with this business in the Punjab and when a village is ready sends a trained man to work it out, and to do everything possible to obtain unanimous acceptance of the new distribution of land.

Till recently there was no law by which even one obstinate landowner could be prevented from spoiling the whole plan, but legislation has now been passed which will enable a certain majority to compel the rest to join in this obvious reform. So keen has the demand now become for consolidation that people are gladly paying up to eight or ten annas and more an acre to get the work done.† This is not the whole cost but it is a promising beginning.

* See pp. 155, 160. [¶]

† In one village they are actually paying Rs. 2-4 an acre.



CONSOLIDATION OF HOLDINGS
Before and after Consolidation. Note the new straight roads.

The second requisite of land is that it be protected from erosion.* The topsoil and the rain-water are the two greatest capital assets of an agricultural country, but by allowing the vegetation of the uncultivated land to be destroyed and by neglecting to level, terrace and embank the cultivated land, many people are letting one of these two national assets destroy the other instead of using both to produce wealth. People who neglect their land are not merely destroying their own and their children's heritage, they are destroying the biggest national asset of an agricultural country. The State, therefore, has every right to interfere and insist upon the proper conservation of the land surface of the country. Unlevel fields must be levelled and terraced and every bit of *barani* land must be protected by banks so that where the rain falls, there it shall stay until it has done its work. Standing water when no longer wanted is drained off, if possible, by drains at the back and not the front of the terraced field, so as to involve less risk of erosion by letting the water run down the steep edge of the terrace.

3. Water. This can be subdivided under the four following heads:

(i) *Rain-water.* Almost everywhere the rainfall is complained of as insufficient, and yet very little attempt is made to make the best use of it. Where land is unlevel, it must be levelled and terraced and all rain-fed land must be surrounded by small banks (*waibandi* or *daulbandi*)† so that all the rain which falls will be held up until either it has soaked into the soil or the cultivator releases it himself by opening his banks. If rain-water is allowed to run away uncontrolled it does untold mischief. First, it takes away part of the topsoil. The topsoil contains most of the plant food and, in addition, everything which has fallen on the surface of the land since it was last ploughed—the dung of the cattle, animals and birds and all the other animal and vegetable refuse that collects on the surface of the land. Besides

* See chap. vii, *The Problem of Erosion*, p. 69.

† See pp. 66-69, 200 (17).

this, it soaks out the valuable chemicals in the soil and takes them away with it. Then it seals the pores of the soil, thereby preventing the water from soaking in. Finally it cuts away the fields, and one has only to ride through the Salt Range or any other hilly area to see the terrible damage done by the uncontrolled run-off of rain-water cutting back deeper and deeper every year into the fields, all for the want of a little care and labour. Wherever one sees good crops in the hilly areas one finds terraced and embanked fields. Wherever the crops are poor, one may be sure the fields have not been levelled, or the embankments are broken or defective.

In general, a baked stubble will not absorb water like a ploughed field; weeds help to use up the water in the soil; manure helps the soil to hold more water; crops sown in lines and on ridges use less water than crops sown broadcast, and get more benefit from it.

(ii) *Well water.* Wherever there is sweet water within reasonable reach of the surface, wells should be sunk. The sinking of wells in canal areas is extremely important as an insurance against canal closures, as a partial corrective to the steady rising of the water-table in canal irrigated lands, and as a means of growing more varied and more valuable crops, both for the market and to secure a better and more varied diet.

For short lifts the old fashioned *charsa*, or leather bucket, which requires four bullocks and four men, is a very expensive way of taking water from a well. The most practical method for a smallholder is the Persian Wheel, with galvanized iron buckets and iron machinery. There is more friction in wooden machinery, and earthen pots are continually breaking.

Wells which do not give sufficient water for continuous working may often be improved by boring. In the Punjab this work is undertaken by the Department of Agriculture. At the moment, in order to encourage the cultivators to bore their wells, no charges are being made for overhead expenses. The well-owner has to pay for the pipes and strainers and the wages of

the Government borer and of course provides all the unskilled labour. Exclusive of this last the cost works out at about Rs. 220 for an average well.

Persian Wheels are efficient to a depth of about fifty feet, after which a bullock or engine-driven Boulton elevator is more efficient. Even the *charsa* is useful for these greater depths. If the well has a very big supply of water, an engine may be cheaper and more efficient than bullock-power, but unless water is almost inexhaustible an engine will not pay, and the too rapid lowering of the water-level in the well will soon spoil the well itself. Before boring a well or fitting any other lift—whether bullock-driven or mechanical—except the well-trying Persian Wheel, well-users should get expert advice. Otherwise, they may lose their money or spoil their well. This advice is given free of charge by the Agricultural Department.

A little capital can be very well spent in lining field channels with masonry or concrete to prevent loss of water and to save labour in repairs, particularly in sandy soil.

(iii) *Canal water*. Just as with rain-water so with canal water, cultivators complain that it is insufficient, and yet for want of a little thought, work and self-discipline they do not make the most of it.

The following are some ways of making the best of canal water:

(a) THRIFT

1. Watercourses should be kept straight and clean and should go the shortest way that the lie of the land will allow.
2. Consolidation of holdings is essential for economical use of canal water.
3. Wherever a watercourse crosses track or road, it should be properly bridged.
4. Make your field banks strong to prevent breaches and waste of water.
5. The *hiaras* or compartments into which the field is divided should be as small as possible. No one would dream of making as few as two or four compartments to the acre for

well water, and yet canal water is just as precious as well water.

6. Crops should be sown in lines and ridged up when they are growing so that the water may run between the lines and ridges—this uses less water and is better for the crops.
7. Well-ploughed land holds moisture better than badly-ploughed; so does well-weeded land and so does manured land.
8. Break the hard crust of the land with hoe, harrow or plough as soon as it forms after watering or rainfall.
9. Stubble should be ploughed up as quickly as possible after the crop is cut, so that it may benefit by any rain that may come. If possible, save water by dry-ploughing.
10. Level your fields so that you can water them with the least possible quantity of water.
11. Don't use more water than you need. It does not help you and it deprives someone else of water he needs, and helps to raise the subsoil water level.
12. If you use canal water as thriftily as you do well water, there will be more than enough for everyone.

(b) GOOD CITIZENSHIP

Given fair play all round, canal water will go much farther than when everyone thinks only of himself. All extra water obtained dishonestly means that someone else will get less than he is entitled to.

Have nothing to do with the cutting of canal banks, the blocking of channels, the breaking of *waris*,* and the playing of any other trick in order to get extra water at someone else's expense. All these things are nothing but theft; they are anti-social acts, they lead to reprisals and resistance, and all of them in the end mean waste of water.

Stealing canal water is not robbing Government; it is robbing your neighbour. So don't give evidence in favour of your

* The schedule showing the time and length of each cultivator's turn for water.

relations or friends when you know they have cut a canal or done any other crime against their neighbours.

The proper use of canal water is a complicated business and requires a well-developed civic sense and the most honest, loyal and intelligent co-operation both between the irrigators themselves and between the irrigators and the canal authorities.

(c) GENERAL

(1) Farmers should be ready at all times to change the proportions of their crops or their rotation so as to make the best use of water when it is abundant and to avoid loss when it is scarce.

(2) Farmers should make experiments with various numbers of waterings and depths of water to see how to get the best return with the least water.

(3) The ideal method of irrigation would be to buy and sell water in quantity, but the Punjabi is not yet a good enough farmer either to see the advantage of this both to himself and to Government, or to organize himself and his fellow farmers to carry it out.

(iv) *Flood water*. Bunds can be built in most of the hilly areas to hold up water for the irrigation both of the bed of the pond above the bund and for the watering, by mere flooding or by canal channels, of the land below. This work is usually left to Government, but there is no real reason why villagers, and even whole villages, should not join together and make their own co-operative bunds. Naturally the cost will be far less and the stimulus of successful enterprise will lead to lots of other good work. The building of bunds controls the run-off of the catchment area, protects the land below and increases cultivation, increases the subsoil water and raises its level, besides sometimes causing the formation of springs.

Finally water can be lifted from tanks, rivers, and streams, and also from canal channels, for land which lies too high for direct watering from the canal channel itself. Even temporary *jheels* (swamps and shallow lakes) should be used to secure better crops. A Persian Wheel or an engine is used or, if the

level of the water is fixed and within a few feet of the field level, a *jhalar* can be used; that is, a wheel with buckets attached to the rim. By far the most efficient form of *jhalar* for short lifts is that introduced from Egypt by Colonel Noel and now working at the Tarnab Farm near Peshawar. Lift irrigation from canal channels is not common in the Punjab and presents great difficulties when combined with flow irrigation.

4. Manure. The dirt of the village is the raw material of good crops, but a very great deal of it is at present wasted. Everything that is not thrown into a pit is liable to be wasted. It will be blown away by the wind, washed away by the rain, or scattered by the feet of human beings and animals. Every kind of animal and vegetable waste, therefore, has got to be collected in pits.* Nor must anything be burnt except for necessity. A lot of rubbish is now burnt either to make the village tidy for inspecting officers to see, or out in the fields because the villager is too careless or lazy to collect it in a pit. The necessity for making dung-cakes for fuel has now been largely eliminated by the introduction of the hay-box [see pp. 45 and 290 (10)].

A very common habit is to throw raw unrotted manure on the fields. This is bad farming, particularly where water is not abundant. Raw manure attracts white ants, and instead of feeding the crops some of it will feed the ants. Further, before it can feed the crops the manure must be rotted—raw manure is like raw food, it is indigestible—and while rotting it wants water and air. So do the young crops, but the manure will use the water and air in the soil and so the crops will dry up. That is why farmers say that manure 'burns up' *barani* crops. They are right to the extent that unrotted manure is bad for the crop sown just after it has been put on the field, and will only benefit the

* See p. 31, etc. The ideal system of pits can be seen on the Ingram-Skinner Estate in the Palwal Tahsil, Gurgaon District, less than fifty miles from Delhi. Both the shape and the siting and the use of them are perfect and every field in about 20,000 acres gets a thorough manuring once in four years. One look at the crops, the villages and the people is enough to show that here is the solution of one of the biggest of India's rural problems, the disposal of village rubbish, refuse, ashes and sweepings.

succeeding crops. Put in rotted manure and it will help the first as well as the following crops. The rotting can best be done in pits, and therefore every farmer must dig and use pits. The best manure of all is compost, but this means work, and so far the Punjab farmer, in spite of the many idle days he has during the year, has declined to add to his income by turning his refuse into compost.

Compost is best made in shallow pits, about two feet six inches deep. Only half the length or breadth of the pit is filled, water is added, and at the end of every fifteen days the manure is turned over, water being added whenever necessary to keep the fermentation going. In two months or so the manure is ready for the fields and it is a highly valuable plant food. Full particulars of this process can be had from the Institute of Plant Industry, Indore,* or from the Punjab Agricultural Department. For those who are not yet sufficiently energetic or awake to their own interests to make compost, the next best thing is the six feet deep collecting pit.†

A common and widely held fallacy is that the use of the country round the village as a latrine is good farming. In the first place only a fraction of the people use the actual fields at all. Even for those that do, the only profit the field gets is the urine, unless the field is ploughed up very soon after use as a latrine. The rest is rapidly disposed of by the many kinds of organisms that prey on it. No, lazy or dirty habits do not make good farming! The fields near the village are certainly more fertile than the rest. They get a lot of urine and they also get a lot of highly charged rain-water running out of the village, animals stand about there and most of what manure is thrown or carted out of the village only reaches the fields nearest the village.

In other countries, fields are manured for every crop. In this country even irrigated land is rarely manured every year, and *barani* land usually gets no manure at all. Every possible scrap of manure must therefore be scrupulously collected and preserved

* See also p. 290 (1).

† See p. 32.

as a part of the ordinary routine of home and farm. Even then there will probably not be enough for all crops. For this additional supply there is either green manure or chemical manures.

Chemical manure is at present very rare in the Punjab. It is no use for 'ranchers', or extensive cultivators, but a few first-class, intensive farmers are profitably using sulphate of ammonia and potassium nitrate for sugarcane, potatoes and chillies. Green manure costs only seed and labour and can be used in irrigated areas to supplement the natural supply. The best crop for green manure is *gawara*, but hemp and others are better suited to some soils.

Green manuring is not often possible in the *barani* areas of the Punjab owing to the scanty rainfall, but *sarkanda** grass and other such wild vegetation have been most successfully used to improve sandy land.

One of the best kinds of manure is the urine of the cattle, but this is usually lost by all except those who tether their cattle in their fields, a custom which should be encouraged. Those who for fear of thieves, or for other good reason, keep their cattle at home, should sprinkle earth on the floors of their stables and yards. This will make the cattle more comfortable and when it gets soaked with urine it must be scraped up, taken to the fields for manure and replaced by fresh earth.†

Barani soil must not, of course, be over-manured. It must only have as much manure—properly rotted—as will produce such crops as the rainfall is sufficient to bring to maturity. Therefore the less the rainfall, the less the manure required.

For manure pits see pp. 31-33, and p. 290(1).

* Pampas grass (*Saccharum munja*).

† Trenching is another way of using manure. A trench one yard wide and twelve inches deep is dug and filled with rubbish and sweepings. This is repeated all round the field, the earth from the new trench being thrown on to the rubbish just laid down until there is a continuous layer of manure buried a foot deep throughout. This forms a ribbon of manure, too deep to be disturbed by the plough, retaining moisture, renewing itself with the roots of the crops and giving magnificent crops for very many years.

5. Good seed. The Agricultural Department has evolved better varieties of seeds for many crops, particularly wheat, rice, cotton and sugarcane. The best general utility wheat is 8-A; 9-D is very popular in submontane areas; C-518 is for strong soils and first-class conditions: it gives a magnificent yield, has a very strong stalk and is therefore less apt to lodge. The latest and most promising variety is C-591 which, incidentally, makes the best *chapattis*. Every year fresh progress is being made, and, whether for wheat or for any other crop, the cultivator should be continually consulting the Agricultural Department for new and better varieties. Government, however, cannot provide seed every year for every farmer, and it is the duty of everybody, great and small, to grow seed for himself and his neighbours.

It is also his duty to keep the seed as pure as possible, and fields intended for seed, whether for himself or for his neighbours, should be very carefully 'rogued', i.e. every other variety of the crop except the one required for seed should be removed before the crop is cut. Wheat and rice are heavy seeds to transport, and therefore if the villagers, once they have been supplied by Government, do not make their own arrangements for keeping their seed pure from year to year it will always cost them more. Good farmers, however, must always beware of their seed deteriorating, and be ready if it shows signs of doing so, to buy fresh seed to replace it. Government is establishing more and more seed-selling agencies, but big landlords, Court of Wards Estates and co-operative societies should always be seed depots for themselves and their neighbours. All good shopkeepers who sell seed at all should sell nothing but the very best. It is in their own interest to do so as good crops raise purchasing power, and stimulate trade and business.

Cotton seed is a particularly difficult matter as ginning factories often sell mixed seed and Government can never provide enough for everybody. Cultivators should gin enough of their

* See pp. 290 (11), 301 (13).

best cotton to provide themselves with pure seed for the next year.

Good seed naturally costs more than bad seed and Government is bound to sell first-class seed slightly above the market rate for ordinary seed, particularly in the case of food grains; otherwise, as the Government seed is pure and clean, it would often be eaten instead of being sown¹. Even so, however, good seed probably works out actually cheaper than dirty adulterated grain sold at a slightly lower price. Cultivators must therefore be ready to pay a slightly higher rate for the best seed. It is a rule all over the world that good things cost money, and the villagers have got to learn the meaning of the phrase 'cheap and nasty'. Whether one is buying seed, bulls, ploughs or anything else, it is generally wiser to pay a bit more and get a better article.

Another thing which makes Government seed more expensive is that it has to be bought at harvest time and stored till the next sowing season. The villager, of course, pays nothing for storage, but Government does. Those who want Government seed should order early, as Government must buy at harvest time and cannot afford to store large quantities of seed it is not likely to sell.

Farmers should always insist upon sowing nothing but the best seed, whether they put aside their own seed at harvest time or buy it from their neighbours or from Government. The other costs of cultivation are the same whether the seed is good or bad, while the difference between the cost of good and bad seed is so small, and, assuming proper methods of cultivation, the difference in yield is so great that any slackness here is sheer stupidity. Nothing is more disappointing than to see what looks to be a fine crop growing up and then to get a poor yield from it because the seed was bad; or to take several years to grow a fruit tree only to find that the fruit is of a poor quality, because an indifferent seedling was planted.

6. Strong cattle. See Chapter VIII.

7. Proper implements.* There are many simple and cheap

* See p. 294 (1, 2).

implements recommended by the Agricultural Department which not only save labour but do very* much better work than the local ones: Furrow-turning ploughs are essential for cleaning the land, and unless the land is clean crops will not thrive, though pests will. Well-ploughed land retains more moisture than badly ploughed land, and is therefore less dependent on regular rain or irrigation. There are many kinds of good furrow-turning ploughs, and some are made in the towns and villages of several districts. The cheaper kinds are Meston, Hindustan, and Hissar; the more expensive are the Raja, Punjab and Chattanooga. These latter do much better work but cost more and require better bullocks and more skilful ploughmen. The first ploughing after harvest should invariably be done with a furrow-turning plough.

Cheap drills evolved by the Agricultural Department are now available for sowing various kinds of seeds. Then there are harrows, cultivators, scythes, cane crushers, *gur* furnaces, sugar mills, chaff-cutters and winnowers. Tractors and power machinery are not recommended for the small fields and holdings of the Punjab, but the small oil-engine is good value for pumping, chaff-cutting, oil-pressing, grinding flour and milling rice. Weeding can be done much more quickly standing up with a long-handled hoe than squatting down and using a *kurpa* or *ramba*.

8. Common sense and hard work. The Punjab is a country of small holdings, and so the methods of a rancher are out of place and, whatever crops he is growing, the nearer the farmer approaches to the methods of the market gardener, the more likely is he to see his way home every harvest.

The Punjab farmer works very hard when he is ploughing, sowing and reaping, but he loses much of the value of this hard work by failing to work steadily day in and day out through the whole year*; and by work I mean brain work as well as hand

* See pp. 79, 281-3. Steady hard work is the essence of successful farming. It should be the farmer's ambition never to be idle. A. G. Street says of English farming, in *To be a Farmer's Boy*, 'There is never one single day or minute in the year when there is nothing to do on a farm.'

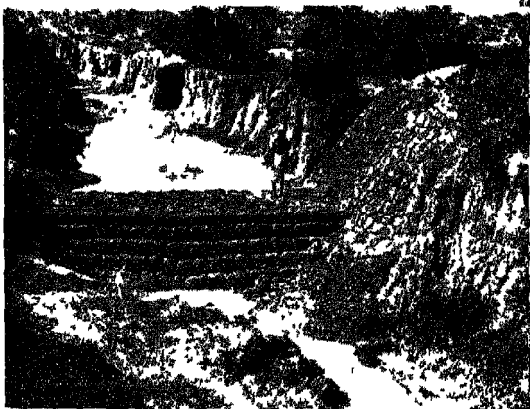


THE IMPORTANCE OF CHIMNEYS

(above)
A chimney in making, supervised by the welfare worker.

(right)
The chimney, made of mud only, is ready. (See p. 44)





By courtesy of Sir Alexander Tottenham, Administrator, Pudukkottai

Above —Bunds to hold up water and soil to prevent further deepening of the gully

Below —A big bund built by joint effort holding up a lot of water (See p 58)



work. The farmer must always be thinking how he can improve his home, his village and his farm. The seed question is worth a lot of thought and it is worth going a long way to look at other people's crops or at Government farms to see whether there is anything to pick up in the way of better seeds, better methods or better implements. Fallows and crop rotations are most important for maintaining the fertility of the soil, particularly where manure is scarce.

Many crops should be sown in lines, such as cotton, wheat, barley, gram, maize, *bajra* (a millet), *arhar* (a pulse) and sugarcane. Line sowing makes ridging possible and weeding and crust-breaking easy, as bullocks and harrows can then be used. A better stand of crop can be obtained even with a lower seed rate, sun and air will reach the crops better, and cotton-picking will be easier.

Then there are markets to be thought about. It may not be wise to go on sowing wheat and cotton year after year. There may be other things which are more worth sowing, particularly in the neighbourhood of towns. Townspeople want all manner of things and are continually being tempted by new fashions. The townsman wants his stuff early and the man who produces melons or vegetables, or whatever it is, a few days ahead of his neighbour, gets the cream of the market. Why should not the farmers combine to market their produce instead of all dumping it on the market at the same moment and in competition with each other, and so allowing the middleman to quote his own price? Smallholders in other countries market co-operatively; why not in the Punjab too? I need not labour the point. Farmers must be mentally alert and active every day of the year and should always be on the look out for new crops, new markets, new business methods and new ways of profitable farming. The farmer must be always ready to learn, particularly from the Agricultural Department which is paid from his taxes to help him. Once the farmer sinks into a groove and farms from mere habit, as his ancestors did before him, he will drop behind in a competi-

tive world, his mind will atrophy and his farm will deteriorate.

The cultivator must always keep in touch with

- (i) Prices and markets
- (ii) The Agricultural Department and its farms
- (iii) The printed word, whether it is newspaper, pamphlet, poster, journal or book, dealing with his subject
- (iv) What other people are doing, particularly those whom he knows to be good progressive farmers.

So much for mental, now for physical labour. Plenty of good ploughing is the secret of good farming. Hard-baked stubble is doing no good, but turned over in rough clods it will get all the benefit of those highly fertilizing agencies, the sun, the rain and the wind. Ploughing not only conserves moisture but helps the aeration of the soil, kills the weeds and turns up weed seeds and insects for the birds to eat. The best ploughing is dry ploughing, but the land in the Punjab is usually too hard for this. The Hissar plough has been specially designed for dry ploughing and enables the farmer to get his land ready for the monsoon and so get his seed in as soon as the rain comes. By ploughing dry the farmer of irrigated land can save a watering and save waiting for his turn for water.

The levelling, terracing and embanking* of the land has already been mentioned as well as the collection of every bit of animal and vegetable refuse. Intercultivation, hoeing, weeding,† and harrowing are extremely important both to preserve the moisture in the soil, to assist aeration, to keep the land clean, and to give the crops a chance of growing properly.

Village roads must be kept in order and raised above the level of the fields otherwise it will cost more to get the crops to market; after rain it may not be possible to get them there at all, or the cattle may be damaged on the way. Clod-breaking is very generally neglected; in fact, there is a lazy man's

* See pp. 54, 59, etc.

† *Pohh* one of the worst weeds possible, is actually gaining ground in many parts of the Punjab, and yet the farmers complain that their holdings are too small!

proverb in the Punjab, 'the bigger the clods the bigger the gram crop'; Cane sets must be soaked before planting. Cotton and other crops must be sown in lines. These operations require a little thought and labour, but they all add weight to the crops, amounting to several maunds to the acre. The making of compost is yet another profitable job.

9. Attention to crop diseases and pests. Crops are liable to be attacked by pests and diseases, just like men and cattle. The causes are in general the same—too little food or the wrong kind of food.* Badly ploughed land will harbour insects but will not hold water. Neglected banks and terraces, unrotted manure or shortage of manure, failure to weed or hoe, too much or too little water—all these things mean unhealthy crops, and unhealthy crops, like unhealthy children, cannot resist cold, drought or insects.

Crops require constant attention. Whenever a crop looks unhealthy, the cultivator should take steps to find out why, and if he can find the remedy, he must apply it, however much work is required. Many of the crop pests (e.g. white-fly) are got rid of by spraying. Water strengthened with tobacco juice or soap, and even plain water, will often do a lot of good.

Here are some common crop troubles:

(i) *Wheat smut*. When the black heads begin to appear, they must be carefully collected and buried or burnt, so that the disease may not spread. This disease is carried from year¹ to year by the seed and therefore, if the seed is clean, or a smut-resisting variety is sown, there is no reason for smut ever to be seen in the fields. Wheat seed can be freed from smut as follows: In May or June take all the wheat intended for use as seed next year and soak it in water for about four hours, and then spread it out to dry in the sun for several hours in the middle of the day. When it is quite dry, put it away in a thoroughly clean place.

(ii) *Gram blight* is spread by keeping the land foul. Proper

* See p. 105.

ploughing and the destruction of every vestige of the previous crop are necessary. Then start afresh with blight-free seed* from the Agricultural Department.

All places for storing grain and seed should, of course, be kept scrupulously clean, and be thoroughly swept out or burnt out every time they are emptied and before they are used again. Keen farmers will fumigate their grain and seed stores every year, and will see that the inside walls are smooth and without holes and crevices. Fumigation is done as follows:

Seal up every ventilator and crevice of the room with wet clay, put braziers inside with sulphur added to the charcoal, and then when the room has reached a very high temperature seal up the door and leave it for forty-eight hours. This is the best way to kill all the insects and germs, and, followed by a thorough sweeping, will help to stop the store chamber from being a source of crop disease.

(iii) *The kutra moth*. In *barani* areas brownish caterpillars every now and then eat up the whole of the monsoon crop as it comes out of the ground. The cultivators refuse to connect the yellow caterpillars with white moths which were seen flying about like drifting snowflakes after the first showers of the monsoon had softened the topsoil sufficiently for them to hatch. But these moths were the parents of the caterpillars. If people doubt it, get the village schoolmaster to keep some of the moths and hatch out their eggs. The time to stop this pest is when the moths hatch. As soon as the rains have softened the ground several inches deep, the moths will hatch out of the ground, and light-traps must be placed in the fields to catch them. Fill a broad basin with water, add a teaspoonful of oil to make certain that when a moth falls into the water it will not get out again, put a brick in the basin, stand a hurricane lantern on the brick, and the trap is ready. These traps must be distributed throughout the fields at intervals of about a hundred yards, and placed on little mounds of earth two feet high. Light the lanterns

* After years of effort, a blight-resisting grain seed has been obtained.

every evening* until the moths have all disappeared. Every morning the water will be found choked with dead yellow-tail moths. Unfortunately a lot of other insects will also be caught, but this cannot be helped. The farmer is entitled to protect his crops even if it does mean the destruction of a certain number of innocent insects. This, of course, is an excellent job for schoolboys and Boy Scouts.

(iv) *Top-borer and pyrilla moths.* Sugarcane is attacked by two moths, the top-borer and pyrilla. Pyrilla must be tackled in April and May, the moths caught in hand nets, and the egg clusters on the cane-leaves crushed between thumb and forefinger.

The top-borer must be attacked from February to November. Its eggs are laid on the leaves and must be crushed. The moths can be caught sitting on the leaves by day and like the *kutra* moth must be caught at night in a light trap. The Agricultural Department have found a natural enemy of the top-borer in a minute insect parasite, and this they will help the farmer to use. The top-borer can also be attacked in the winter. It hibernates in the cane-tops and so if farmers will finish their cane-crushing and feed the tops to their cattle before the end of February they will greatly reduce this pest. Cane left for seed should be buried and not left standing for insects to live in.

Both these and all other pests the villagers must organise themselves to destroy, and schoolboys and Boy Scouts should be their most active helpers.

CHAPTER VII

THE PROBLEM OF EROSION

1. **The menace.** Erosion is a world problem but is little understood in India and rarely recognised. Let me try to explain it as briefly as possible. In their natural state the hills are protected by a cushion or mat of grass, shrubs and trees which, with their foliage and roots and the dead leaves

and other rubbish they collect, form a thick vegetative cover. This cover both holds up and protects—besides improving and increasing—the soil and absorbs the falling rain like a sponge. This mitigates the severity of the monsoon floods, maintains the subsoil water level in the wells in the plains below, and provides a steady flow of water in the rivers through the rainless months of the year, thus enabling the canals to provide ample water at all times of the year.

The hills are thus a reservoir of grass, timber and water, and as long as the vegetation, grass, shrubs and trees are undisturbed all is well. In some northern countries rain falls gently and continuously through a large part of the year, the ground usually remains soft, the vegetation has a long growing period and controlled grazing improves the pastures. In most parts of India however everything is different. Rain comes in heavy falls with long dry periods between, and so the grasses have a short growing period.

In such conditions the balance of nature is very delicate and the moment it is disturbed disaster follows. The principal disturbing cause in India, as elsewhere all over the world and during the whole of human history, is uncontrolled grazing and browsing, whereby the vegetation is eaten faster than it grows. Even where grazing is restricted during the growing period the good grasses and shrubs are so closely cropped during the dry periods that they cannot thrive and only the less valuable grasses and shrubs are left. Meanwhile all the seedling trees are eaten up as they sprout. The result is that the pasture steadily deteriorates, the vegetative mat disappears, the ground gets more and more bare and dry and the sharp hooves of the grazing animals pulverize the surface of the soil. Down comes the heavy rain and washes the upper layer of soil off the exposed hillsides and pastures. This upper layer is called the topsoil and is slowly formed by nature, over hundreds or thousands of years, by the action of the weather and the grass, shrubs and trees.

This topsoil contains most of the fertility of the soil and where the vegetation is undisturbed steadily increases and improves. Where grazing is allowed this fertile topsoil is washed away and instead of increasing is decreasing, faster or slower according to the steepness of the slopes, the violence of the rain, the amount of grazing and the composition of the soil. In places the removal of the topsoil may be slow, in others it may go in a very few years, but in all cases the pastures and hillsides are deteriorating instead of improving, the livestock has to range further and crop closer to make a living and so things get worse and worse every year with increasing rapidity.

By actual measurements extending over several years the Forest Department found that in a low hilly tract of heavily grazed land out of an average of 41 inches of rain which fell in two months each year, 53% of the rain-water ran off the surface immediately. Against this only 12% ran off an adjoining area which was well covered with grass and shrubs. Measured in another way, the run-off from every square mile of an over-grazed area averaged 1600 cubic feet of water per second against only 600 cubic feet from the protected area.

With further protection and afforestation, the run-off from the latter area was reduced to only 100 cubic feet of water per second.

In the same area soil was lost at the rate of 400 maunds an acre every year, against only 82 maunds in the protected area. Imagine the disastrous effect of all this soil and water pouring down on to the plains below and the increasing dryness and barrenness of the slopes from which they came.

In cultivated land erosion is equally common and equally disastrous. Except for the very short period when the crops are thick enough to prevent the rain doing any damage all unlevel fields are steadily losing their fertile topsoil—the principal capital asset of an agricultural country. Heavy rain, instead of soaking in runs away taking with it this fertile topsoil as well as valuable chemicals from the soil it leaves behind.

The rain thus does harm instead of good. The topsoil gets steadily shallower and the crops want more and more frequent rain. A sharp burst of rain will sometimes remove the whole of the topsoil leaving the hard, smooth subsoil with just the criss-cross marks of the plough on it to remind the farmer of his toil! Field erosion takes two forms, sheet erosion whereby the whole surface of the soil is slowly removed, and gully erosion where nullahs and gullies are formed and get steadily deeper and cut back further into the fields, destroying increasing quantities of good land. The rate of deterioration and destruction varies as in the case of hillsides and pastures with the slope, the rainfall, the kind of soil and crops and so on. But the fact is that all unlevel arable land is deteriorating and whereas a farmer's first duty is to conserve and improve the quality and depth of his precious topsoil, the opposite is happening over a vast area of India.

It is not the eroding land alone that suffers. An unending avalanche of mischief is started by erosion. Silt-laden water seals the pores of the soil, and will not easily soak into the ground, while the ravines and gulches drain out the subsoil water so that not only does the field or pasture itself quickly dry up and demand rain at shorter intervals but the supply of water to the subsoil is reduced and the wells in the neighbourhood and in the plains below begin to suffer.

The level of the water in the wells in parts of Ambala and Hoshiarpur Districts has already dropped below that at which well-irrigation is profitable and part of the population has begun to migrate elsewhere.

The canals depend for their water during the long periods of drought on the water that has soaked into the ground during rainfall. Where the vegetation has gone very little water soaks into the ground and canals and hydro-electric installations are already beginning to suffer. Meanwhile the monsoon floods are naturally increasing as this water rushes off the bare hillsides. These floods are greatly swollen by the vast masses of

silt they carry and so is the damage they do on their way to the sea. Moreover as soon as the slope flattens in the plains the floods begin to drop the silt, filling up the river beds—so that future floods will do still more damage, and compelling road and railway bridges to be raised to let the water pass below them. The canals are filled with silt which has to be removed at great expense (the money spent on silt clearance would do wonders if spent on combating erosion up above!) It is estimated that the carrying capacity of one Punjab canal has been reduced forty per cent by silt. In areas where hill torrents come down to the plains vast quantities of fertile land have been turned into sandy wastes, and many wells and villages have been washed away. Below the Salt Range and the Siwaliks of the Punjab something like a million acres of good land must have been lost within the last hundred years. Every year new peaks of flood are recorded in the monsoon and new troughs of water scarcity in the winter. It is even suggested that erosion is affecting the rainfall itself. This cannot be proved but it is obvious that it is easier for clouds to release rain upon a cool green countryside than on a hot dry desert.

In the steeper hills, particularly near the hill stations, the damage is absolutely terrible. Near each hill village the hillman destroys the trees and the grass cover and, without waiting to terrace the new land, sows his potato or other crop on the steep exposed slope, often with the furrows running down hill to help the processes of destruction. The heavy rain washes the topsoil away and in a very few years his field is barren and he has to uncover yet more land to plough.

One point, not often realized, which makes the position far worse, is that the heaviest grazing and lopping and the most extensive cultivation is in the lower hills, up to and round the level of our hill stations, and it is on these lower hills that the monsoon falls with its greatest force.

The timber wealth of the hills can be and is being scientifically exploited by the Forest Department, but what the hillman and

grazier are doing is not exploitation, it is sheer merciless destruction,—the maximum of devastation with the minimum of economic return. As population increases and with it the livestock, the pressure on the land and the grazing grounds increases. The hills are overrun with sheep and goats and with innumerable cattle whose principal value is their skin and bones. India is said to occupy less than one thirtieth of the world's usable area and to contain one third of the world's cattle and the world's smallest milk consumption.* The main reason for this overcrowding of the pastures is that grazing is either free or absurdly cheap. If grazing were charged for at economic rates useless cattle would soon become scarce. Goats and sheep usually belong to people without rights in the land. The goat is called the poor man's cow. It is really the thief's cow as it rarely pays for the fodder it eats and never for the damage it does. Not in vain was Satan depicted in the shape of a goat, the world's great destroyer. If all animals that were sent out to graze paid fairly high taxes, to be spent in soil conservation work, more attention would be paid to their quality and less to their quantity.

The more the grass deteriorates and the more the axe destroys, the farther afield must the flocks and herds range. The more they deteriorate and the larger the numbers of them requisite to keep their owners alive, the closer must they crop to get their food and the keener must the woodman work for timber and firewood. The valuable grasses and weeds thin out and disappear and only the valueless grasses remain. The hoofs of the animals break down the dry surface of the ground already laid bare by the work of their teeth and the axes of the graziers and woodmen. The vegetative mat disappears, the naked soil is thus exposed to the full violence of the rain which is now free to attack the bare hillside, and the fertile topsoil, slowly accumulated in thousands of years, is washed away in a few monsoons, leaving nothing but the infertile, non-absorbent subsoil. One

*Except for China and Japan where milk is not usually drunk.

journey through the hills is enough to show the whole process of destruction. The hills are bare, with huge scars where the naked slopes are scaling off, every ravine is choked with the debris, and when it rains the streams are loaded with soil and sand. The damage is progressively increasing.

It must not however be supposed that erosion of field and pasture is confined to the steep hills. Far from it. All unlevel land is eroding and even though it looks level to the eye most land in India is unlevel. The nearer the hills the greater the slope and the greater the damage but except the river valleys, the alluvial plains and the irrigated or properly terraced lands, the whole of India is unlevel and therefore eroding.

Some people take refuge in rotational closures but the fact is that after an area has been well stripped by grazing and browsing it will be fifty years before it is in a position to stand up to that treatment again! Considering the fact that there is no such thing as 'grazing' but only 'over-grazing', it is no use whatever trying to compromise with rotational closures or even with 'controlled grazing'. Closure must be complete and perpetual, at any rate, until the people have by education, demonstration and experience become so 'erosion-minded' that they can be trusted in their own interests to look after their pastures and hillsides properly.

This is the present state of affairs, and if it is allowed to continue it must bring certain destruction upon hills and plains alike.

2. The remedy. The remedy is simple although its application is extremely difficult. Generally speaking, if the hills are left to themselves they will rapidly recover. In parts of the Salt Range, where the common land has been divided and every man has put a dry-stone wall round his share, the erosion has stopped altogether in five or six years and the ground is already covered with a mat of grass and shrubs. Wherever complete closure has been applied in the Siwaliks of Hoshjarpur the hills have recovered their forest in a generation.

The land in the plains below, which has been cut away or covered with sand, cannot be reclaimed so easily ; but even there it is only a matter of time and organized effort* for the soil to be brought back to crops. Once the run-off from the hills has been brought under control, work can start in the plains. *Sarkanda* grass, *nara*† and *bana*‡ are planted, then comes a crop of trees—*shisham*, mango or whatever else will grow—and in this way from both banks flood-resisting vegetation is built out into the sandy waste until the stream is confined to a narrow central channel. This vegetation retards the floods and they drop their silt and raise the level of the land, and ceases to wander over the face of the countryside. Meanwhile, as the soil recovers, some of the land can be put under crops behind the protective belt of grass and trees, and in time the fertility of the land is steadily restored. There is also profit to be had from fruit and, provided it is very carefully controlled, from the felling of timber trees.

Counter-erosion work is not uneconomic, and in general the reclothing§ of the hillsides with vegetation contributes immensely to the welfare of the hillmen. In fact continued erosion can only mean increasing malnutrition and disease and final destruction for man and beast. Far more profit and far more occupation can be got out of the hillsides by developing trees for fruit, timber and fodder and other industrial purposes and by leaving the grass to grow, than by sending a horde of lean and bony beasts to jostle for a living by grazing.¶ Left to themselves, the best fodder grasses will flourish and spread and they can then be cut and fed to a row of sleek buffaloes stalled at the foot of the hill. There are villages in the Hoshiarpur District which not only feed all their cattle from the grass cut on their

* An excellent opportunity for co-operative enterprise.

† *Aphida varia*.

‡ *Vitex negundo*.

§ In the United Provinces a wonderful system combining reafforestation with cultivation has been developed for level forest land. See Bulletin No. 10, United Provinces Department *Taungyas* of Saharanpur Forest Division, 1937.

¶ See p. 93.

carefully preserved hillsides but pay all their land revenue from the surplus which they sell. Wealth is no longer counted by herds of cattle ; six good milkers in a stall are worth sixty milkless brutes starving on a hillside. It is absurd to suppose that a good milker can keep up its milk supply if it has to climb hills all day to forage for its food. A good milker is an artificial creature and must be maintained by artificial methods. Hordes of cattle even in the plains are a source of loss and poverty to their owners. In the hills they spell ruin to the plainsman as well as to their owners.

Trees are not everywhere essential to the regeneration of the hillsides. Trees, bushes and grass all have their part to play and are all included in the term ' forest '. Whichever of the three, alone or in combination with the others, makes the best contribution to the welfare of the people must be encouraged in each particular locality. In some places bushes help the grass, and give the best protection to the soil. In others the growth of useless bushes ousts the useful grasses or makes them impossible to cut. In such cases where the bushes are not essential to the protection of the hillsides from erosion, the hillmen must be allowed to keep the bush growth under control. In all counter-erosion work, a balance must be struck so that the welfare of all concerned may be promoted to the greatest degree possible. Although a grass slope will not conserve water like a heavily canopied forest, it will stop erosion and thereby very greatly reduce flooding by taking the silt out of the water. Silt is often a very big part of the volume of floods. It would help greatly in convincing both Government and public of the necessity and possibility of reclothing the hills if small typical pieces of hillside, in conspicuous places, were fenced in and carefully preserved, just to show, year by year, what nature left to herself can do to heal her wounds.

Apart from pastures, slopes and hillsides vast areas of cultivated land are eroding. The floods and silt from this erosion are greatly increasing the destruction of land, wells and houses

further down. All arable land must be levelled, terraced and embanked before ploughing and the terraces and banks must be kept in perfect repair. The consolidation of holdings (see p. 53) is a great stimulus to the terracing and embanking of land. The lower boundaries of the new holdings should of course run along the contours so that they may be properly embanked. Drainage is a matter of vital importance. Besides little stone or brush-wood dams to let surplus water down from terrace to terrace, there must be an escape or safety valve by which heavy storms can be got rid of down the main drainage line. Otherwise not only will crops be drowned but the banks and terraces themselves will be washed away when a really violent rainstorm comes.

One way to get rid of such unwanted water is where possible to grade the terraces so that before the water over-tops the bank on the lower edge, it will begin to flow away to the main nullah bed from the back of the terrace near the foot of the next terrace above.

All banks and terraces must always be kept in first class order—ready at all times to hold up water—and must be regularly visited and repaired before, during and after every shower of rain. A neglected bank means perhaps half a field washed away and may start a cascade of earth and water down the hill which will break many more banks and wash away many more fields before it can be got rid of into the main drainage line. Watching and mending the banks and terraces is therefore like guarding the city wall, where one man's neglect may mean the destruction of the whole town. Shifting cultivation and the ploughing of sloping land must be discouraged first by propaganda and by the offer of concessions and rewards for banks and terraces, and finally by legislation. Practically all land is sloping. So even apparently level land is eroding. The grazing grounds mixed up with the arable lands must be closed to grazing in the same way as hillsides. Once this is done and the arable land is terraced and embanked the nullahs and ravines can be

reclaimed with small dams, starting from the watershed and working downwards.

These dams collect good soil and soon become worth cultivating. Co-operative societies with expert assistance and small subsidies from Government can do all this work, they can also do the reclamation of land in the plains destroyed by torrents and all manner of anti-erosion work and soil conservation and afforestation in the hills themselves.

In many places gullies are rapidly cutting back into the fields and grazing lands. These gullies must be plugged, that is to say, the head where the water falls over the edge and does the actual cutting must be cut back to a slope, and the slope protected by brushwood fastened down to prevent further cutting until a plant cover is established. If careful *watbandi** is done up above to reduce the run-off, and the slopes are helped to grow grass and shrubs and trees, the gully will stop cutting back. Gully-plugging by itself, of course, only gives a temporary check to the damage. To effect permanent improvement, it must be accompanied by an increase in the plant cover.

All this means work, but there is no lack either of time or labour in the hills and *barani* (unirrigated) areas where the work has to be done, and unlike so many of the things the villager devotes his spare time to, it is all highly profitable work. The fertility of the soil will increase, the land will be saved from further erosion and, particularly if the people will keep cattle, goats and sheep off it, there will be more and better grass to cut than ever there was before. If everybody will lay up their pastures and deal in this way with their farm lands, the run-off of water will be so reduced in violence that the people down below will be able to set about reclaiming their lost acres from the sand and torrents which used to spread destruction.

Wind erosion in places of low rainfall like Hissar District must also be recognized and tackled. Here tree-growing is the most important remedy. Even in drought-ridden Hissar, and in dry

* See *watbandi*, p. 54.

years, drought-resisting trees, such as kikar (*acacia arabica*), will germinate if sown on the edge of trenches, and every kind of encouragement and inducement and concession must be applied to make the people dig and sow line after line of trenches—at right angles to the prevailing wind—on all their waste land, open spaces and *shamlats*, and on the boundaries of roads, fields, estates and villages. Government, of course, must do the same on all land and roads under its own control. The closing of pastures and *shamlats*, by encouraging the growth of grass and scrub jungle, will also help both to mitigate the force of the wind and stabilize the soil. Apart from this, the more trees, bushes, and grass in these hot dry areas the less will the hot winds dry up the soil and the crops, the more fuel and timber will there be and the more grass to cut (not to graze) for the cattle. In fact be kind to nature and she will reward you with many blessings, even perhaps including an increase in the actual rainfall itself.

3. The application of the remedy. So much for the remedy. The real problem is its application. The hillman is not interested in the plainsman and he does not realize that he is cutting his own throat as well. He thinks the hills are inexhaustible, and when soil or grazing begin to run short in one place, he has only to go a little farther afield to find plenty more. The plainsman does not realize that it is the hillman who is responsible for the increasing shortage of water in wells and canals alike and for the devastation of his fields by torrents. Both alike therefore resist every effort to put things right. The plainsman thinks that any attempt to control the hillman is departmental tyranny, and no one is more tenacious of his grazing rights than a hillman, or more suspicious of any one who suggests that in his own interests he should change his methods of using his hillsides.

Moreover, we all hug the comforting thought that we have a Forest Department to deal with these things and that this Department is in control of the situation. The Forest Department controls less than one-twelfth of the heavily eroding area of the Punjab, and for the rest it can do no more than advise and

warn—a voice crying in the wilderness till public opinion insists on paying attention to it!

Even where the Forest Department is in full charge, its operations are very much cramped by the severely 'commercial' management forced upon it. It has no branch for what is called in America 'extension forestry'* in which the forester co-operates with the farmers and country-folk, teaching, demonstrating and helping them. Fodder trees offer a very hopeful prospect. The improvement of grasslands has not been touched, except accidentally, and yet grass is a natural resource capable of enormous improvement and it responds amazingly to skilful husbandry.

It is an unfortunate thing that in all countries which respect personal liberty neither vegetable nor animal life can survive. Without rigid control, both game and forests disappear. The reason is obvious. What is everybody's care is nobody's. What is the use of one man taking the 'long' and the public-spirited view and sparing game and forests only to see his neighbour destroy them for their immediate value? The first and biggest thing, therefore, to be done is a very careful and thorough campaign to enlighten the public about this all-important subject. A coloured survey of the catchment areas of our great canals, showing in graded colours from dark green to light yellow the condition of the hillsides, varying from complete vegetative protection to complete desiccation would be very illuminating, and if we could compare the state of affairs to-day with what it was fifty years ago even the most optimistic of us would take fright.

The hillman must be taught that he will gain all round from treating his hillsides properly, and the plainsman must be told why his water supply is decreasing and his fields are being ruined.

In the hills small demonstrations are wanted showing the benefit of levelling, terracing, embanking, gully-plugging and all the other remedies for erosion. Similarly demonstrations

* This has started in the Punjab, the Erosion Circle of the Forest Department.

must be made of how the devastated plains land can be reclaimed.

The easiest way of making a start is to tackle the cultivated land. Until it is levelled, terraced and embanked, all unlevelled farm land is eroding just as badly as uncultivated land or even worse. But it is owned by individuals and it is easier to persuade a single man to protect his interests than to get a whole village to act. Once people have reaped the benefit of protecting their own fields they will be easier to persuade of the necessity of doing something for the common lands, while every field protected is an object lesson to others (see page 58).

All the various methods of publicity must be employed and in particular (i) it must be carefully taught in the schools and colleges in a series of lessons, lectures and demonstrations drawn up jointly by forest experts and educationists. A beginning is being made on these lines in the Punjab. (ii) Models must be prepared for use at shows, fairs, exhibitions, and meetings, as well as in schools and colleges, showing sections of hill and plain before and after denudation. (iii) The wireless and the press and the public platform must be freely used. In this way a strong public opinion may in time be built up in favour of controlling the use and abuse of the hillsides.

Every encouragement must be given to the hill people to change their methods of living and their routine of farming, to replace their wandering cattle with stall-fed, heavy-milking buffaloes, to terrace and embank all cultivated land and to give up tilling all land that cannot be terraced. The growing of fruit, vegetables and other valuable crops such as pyrethrum and teasels must be developed as well as other subsidiary industries, and the use of silos must be encouraged, both to preserve fresh fodder and to enable the grass to be cut when at its best instead of being left till the field harvest is over. Single individuals can do very little by themselves, but panchayats* when they have established themselves and gained the confidence of their villages

* See p. 146.

will be able to do much. Co-operative societies have great possibilities. They can organize the reclamation work in the plains already described (pp. 75, 76) and they can organize grazing and land preservation societies in the hills by taking over grazing areas and limiting the number and seasons of cattle grazing, fixing rotations and organizing grass cutting and silos.

In the Kangra District a new type of co-operative village forest society has been designed which administers not only the village lands but also the Government forests in the area of the village. A working plan for the whole of the land of the village is drawn up with the help of Forest, Co-operative, and Revenue Officers and as long as the society does its work satisfactorily the income of the Government Forests in the area of the village is credited to the society. These societies are very popular and are doing excellent work in preventing erosion, conserving soil and vegetation, tree-planting, and reclaiming eroded areas.

Attempts are also made to induce the villagers to terrace their fields, but as yet these have not been very successful.

The whole of the local revenue, educational, agricultural, forest and co-operative staff must be carefully trained in the whole technique of counter-erosion work, and must be kept long enough in one place to gain the confidence of the people.

In the Salt Range* the division of the common lands has proved an excellent method. While the land was common, it was nobody's care. Now it is divided, each man puts a dry-stone wall round his share, embanks, terraces and cultivates what he can, and carefully preserves the rest. A certain number of people who used to eke out a precarious living on the common land find themselves displaced, but they are bound to be re-absorbed before long, as the improvement in the hillsides must make work for far more people than did the bare hillsides before enclosure. In some districts remissions of land revenue are

In other districts, however, such as Hoshiarpur and Ambala, partition has not solved the problem.

given for hills closed to grazing. This is expensive but perhaps terms can be arranged by which the owners get the maximum economic benefits from the grass, timber, and other products compatible with the preservation of the hillsides. The remission can then be reduced sufficiently for the scheme to be capable of expansion at reasonable cost and still remain attractive to the villagers.

Sheep are definitely less mischievous than goats,* and somehow or other goats must be eliminated. The stall-fed buffalo must relieve the goat of his task of milk production, mutton must be made the fashionable meat, and the demand for wool must be increased by spreading the knitting habit.

In many places, as for instance in the Salt Range and the Gurgaon hills, there are innumerable sites for dams, big and small. These would increase crops and vegetation both above and below the dam, raise the spring level in the plains below, provide water for irrigation and help to control the run-off. Villages are generally too disorganized to build them on their own and these require development by Government and District Boards. Perhaps co-operative bunds are possible.

Government forests, owing to the multiplicity of grazing rights belonging to the villages nearby, are often no better than village hillsides. Where the forest has disappeared and the land is cultivable it might be possible to exchange the cultivable land—on condition of proper terracing and embanking—for the extinction or reduction of grazing rights in the rest and so enable the forest to recover. In general, however, it is no use hoping for people to respect Government forces when they don't respect their own, and the first step is to teach the villages the real use and value of their hills.

Above all, the goodwill of the people must be secured and they must be convinced that Government is out to help them and not to filch their grazing grounds or destroy their livelihood. Once the present atmosphere of suspicion is replaced by confidence,

* See p. 240.

and Government and villagers begin to co-operate in saving and improving the hillsides the problem will be solved.

This co-operation must take the form of regional planning supported by a Soil Conservation Act.* In the Punjab the Chos Act of Hoshiarpur District will serve as the basis of such a law and with suitable amendments will probably be extended to the whole Punjab. The work is so profitable that little if any compensation need be paid for anything ordered to be done or not to be done. The work must begin from the tops of the catchment areas and work downwards. The closure to grazing and browsing of all pasture, forest and uncultivated land, and the levelling, terracing and embanking of all cultivated land are the two main works. Gully-plugging, contour trenching, the damming of nullahs and torrents at frequent intervals (starting at the top), the sowing and planting of trees, to the extent that money and the labour of the people are available will accelerate the cure and increase the profit. New occupations must be found for those who eked out a living by grazing flocks and herds, but this will not be difficult, as soil conservation work multiplies trees, bushes, grass and crops in an almost miraculous way. For grass there is always a use, and generally a sale. One village in the Hoshiarpur District in 1943 sold grass from a closed forest for Rs. 6,000 whereas the same forest had yielded grass worth only Rs. 200 before closure.

4. Canal catchment areas. When the Forest Department was established, canal irrigation was in its infancy and hydro-electricity had not been heard of. But now, such has been the development of both these sources of economic prosperity, that the value of the hills for catching and storing water is many times their value either as sources of forest revenue or of land revenue. The whole land revenue and forest revenue of the catchment area of a big Punjab canal is far less than the sum that would be lost by the failure of the canal to give one watering at a critical period—and it is these very critical periods that are being

This Act has already been passed in the Punjab.

endangered by the misuse of the hills and the disappearance of the forest cover.* The time has obviously arrived to regard hills and forests principally as water-reservoirs and to administer them as such. It must never be forgotten, of course, that the welfare of the hillman is the first consideration.† But fortunately what will ensure the plainsman's water will also enrich the hillman, and so poor is the hillman that with him a very little money will go a very long way. Ten rupees per cusec of winter canal water, spent on the catchment area which provides it, would ensure that cusec for ever, and perhaps in time might increase it to a cusec and a quarter. What could not be done in the way of counter-erosion work if the land revenue and forest revenue of the hills was used as a bait to encourage the people to farm and to live in such a way as to preserve and increase the value of the hills as reservoirs of water, of grass and of timber? The hillman is poor, underfed, and often riddled with disease. An uplift campaign combining better use of the hillsides and better conditions of living is long overdue.

5. **Fuel.**‡ Fuel is becoming an increasingly serious problem as cultivation and erosion spread and eat up the trees. The growing of fuel must be taken up as methodically as the production of crops. The production of electricity at a price which will make it economic to use for cooking and heating, the use of the hay-box for keeping things hot, the designing of cooking grates which will make far more use of the heat generated by the fuel than the present grates do, the conservation of much potential fuel in the shape of coarse grass and crop refuse which is now burnt to get rid of, the manufacture of briquettes from material now wasted or not put to the best use—these things will help, but nothing will take the place of systematic tree-growing, supported, as found necessary, by legislation to compel people to do it. Trees *must* be grown. Their value as fuel is

* The cost of silt clearance in most canals cannot be less than the land revenue of their catchment areas!

† In some hill areas it is a problem of nutrition, human and animal, rather than a purely forest problem.

‡ See pp. 45, 51.

only one and that not the greatest of their values. Government must set the example on its roads, canals, estates, offices, residences and every other possible place. Where erosion is going on, tree-growing is still more essential. The vast areas of the plains destroyed by torrents from eroding hillsides can best be reclaimed by tree-growing, and fortunately trees multiply naturally as soon as the grazing is closed and the force of the torrent is broken by the stopping of grazing in the catchment area—there too trees will grow freely. For wind erosion in places of low rainfall, such as Hissar District it has been proved that kikar, (*acacia arabica*) and other drought-resisters will germinate and grow well even in years of drought if sown on the edges of shallow trenches. Every encouragement therefore must be given by remission of land revenue, or whatever is the best incentive, to make people trench their common lands (at right angles to the prevailing wind), boundaries, roads, and every other open space and plant trees. Government must do the same in all areas under its own control. The problems of fuel and erosion can well be linked and compulsion must be added to persuasion and reward. The broad valleys of the rivers are ideal places for tree-growing but at present where crops are not cultivated there is only coarse grass or tamarisk (*tamarix dioica*). To make tree-growing profitable here and in other places too perhaps, will probably require financial assistance from Government at the start, as the villagers can rarely afford to wait for their tree-crop to mature. In the higher Himalayas there is often an unlimited quantity of potential fuel, but unfortunately there appears to be no possible way of making its extraction an economic proposition.

6. Conclusion. Erosion is a far greater evil in India than is realized both by those who suffer most from it and by many of the experts.

The facts are that all over India, with its heavy rainstorms and long periods of droughts, all land both cultivated and uncultivated, that lies below the snow-level, except for the flat alluvial

plains and a small percentage of arable land which is properly terraced and embanked and a small percentage of forest land which is fully protected, is eroding as fast as innumerable and uncontrolled sheep, goats, cattle, axes, ploughs and fire can lay bare the topsoil for wind and water to remove. The tempo of this destruction increases with increasing population and decreasing vegetation.

The main asset of an agricultural country is its topsoil. The more people to feed, the more topsoil is required. In India the more the people increase, the more the topsoil decreases. Every year millions of acres of land are becoming more and more barren and useless, and hundred of millions of tons of fertile topsoil are being carried away to the sea to form new lands for the next geological era! Not only are the people of the uplands heading for ruin, but those also who rely upon the uplands for their irrigation water. India is destroying its principal asset with suicidal carelessness. Erosion is the greatest single cause of poverty in India.

Not only is there general ignorance about the extent of the erosion going on and the harm it is doing, but there is almost complete apathy.

One reason for both ignorance and apathy perhaps is the curious position of the Government departments concerned.

The Forest Department is at present the expert on erosion but is officially only concerned with its own forests and even there it has full control only of a small portion. The rest is so encumbered with rights that the Department has to sit by helpless and watch erosion destroying them. Except in the Punjab it does not help to conserve and reclaim the pastures and cultivated lands outside its own forests. Every Forest Department however has cried aloud against erosion for the last eighty years or more, but the sympathy of both Government and public has always been with the eroder.

The Agricultural Department has until recently been too busy in its irrigated lands to spare staff for the marginal lands.

The Revenue Department, as the steward of the Estate (so officially described in the Punjab Land Administration Manual) is fully responsible but has hardly studied the problem and has watched with equanimity or ignorance its lands losing fertility or being washed away and its trees and grazing disappear.

With the growth of irrigation the principal function of the hills is now to conserve water for the plains, and the importance of the Irrigation Department as the chief sufferer from erosion and the chief producer of revenue should have marked it out also to be the chief reformer. The irrigation officer however is a mere trespasser in his own catchment area. And when did he insist that the preservation of his catchment area is as important as the maintenance of his distribution system and include the cost of it in his annual budgets? In framing irrigation projects did he ever make alternative estimates of the cost, life, and success of his projects on the two assumptions (i) that his catchment area will be properly nursed and (ii) will continue to be neglected?

The cure of erosion is simple, the terracing and embanking of cultivated land and the complete closure to grazing and browsing of uncultivated land. In the climate of India there is no half-way house and those who talk of rotational or partial closures are deceiving themselves. Along with these measures must come new and better crops and trees, and cottage industries and other means of livelihood, to enable the hillmen to make a better living than they do now and yet not to destroy their hillsides. All this means a huge change in the whole routine of life for those who live in the hills, and will not be effected without great effort, intense propaganda, legislation and the expenditure of some money. Fortunately a little money goes a long way in the hills. The hillman is poor, under-nourished, diseased and neglected, and a whole-hearted campaign of welfare and uplift conducted by well-trained men and women genuinely out to help would work wonders, as soon as they had won the confidence of these people. The whole of the land revenue and all other income obtained

from the hills must go back into the area either as rewards and concessions for doing what is advised or as positive improvements in the shape of roads, contour paths, ropeways, bridges, hospitals, schools, etc. Research and demonstration stations must be established wherever necessary to discover new and better ways of combating erosion and of living and making a livelihood in the areas under treatment.

Erosion touches all departments and it might be advisable to make it a department of its own to which Forest, Revenue, Co-operative and Agricultural Officers are recruited—and perhaps irrigation and animal husbandry officers as well. Even doctors and health experts may have to be added as malnutrition and disease are rife in the Himalayas. These officers will share with each other their specialist knowledge and make a team well-qualified to solve India's biggest problem.

The welfare of the hillpeople must always come first and fortunately this is absolutely identical with the preservation and reclamation of the catchment areas.

Much of the catchment areas of our big canals are in Indian State Territory, but it is unreasonable to expect the States to protect or ensure our canal revenue, until we do so in our own territory and until we are ready to assist them with money and are in a position to teach them the whole technique. When the States see that we are in earnest and that our work brings profit to the hillmen as well as to the plainsmen and we are ready with money and instruction, they will gladly join in.

Once the provincial organization has been decided upon work must begin. The public must be told the whole truth of erosion and prepared for drastic action. Whatever can be done by propaganda, by co-operative and by individual effort must be done, but legislation must be prepared so that closures can be enforced and whatever other action is necessary can be taken without having to wait for one hundred per cent agreement and co-operation of the people whose ruin we are averting and whose

heritage we are saving. Regional plans must be drawn up for each catchment area, great and small, and work must be started from the top. The principle of work is that Government provides the plan, the skilled guidance, a certain amount of money, the organization and the necessary executive authority, while the people themselves each do the terracing and embanking of their own lands and co-operate in the closing of their pastures to grazing and in helping to find alternative occupations for those whose whole livelihood previously depended on the grazing of flocks and herds.

It has been suggested that surveys should be made and a co-ordinating staff appointed for the whole of India. These are unnecessary postponements and will only delay matters. Enough of the facts and enough of the simple remedies are known for ample programmes of work to be framed. Publicity is certainly required both to prepare the general public for drastic action and to teach those who live in eroding areas how to co-operate with Government and what benefits co-operation will bring. A steady stream of carefully planned publicity by radio, newspaper (particularly illustrated newspapers) and film should be poured out, while properly prepared readers and lessons should be issued to all classes of school and college students and to troops. As for co-ordination there is little work to co-ordinate and while co-ordination of publicity might be useful it is by no means essential.

Erosion is a matter of domestic policy in each province. If we await for surveys, reports and a co-ordinating staff and then a central research institute and so on, nothing will ever happen. What is wanted is for every interested Government to set aside money and get on with the job, sending a man occasionally to see how their neighbours are tackling similar problems to their own. When a good start has been made it will be time to consider such details as a sorting-house for information, etc. What is most necessary now is to avoid the further postponement of action for any excuse whatever, however plausible.

CHAPTER XVIII

CATTLE

CATTLE are almost, if not quite, as important as crops for the health and wealth of the villager. Whether it is working the land, carrying the crops to market or feeding the children, the villager is helpless without his cattle. The better the cattle, the better the villager. In a general way, bad cattle eat as much as good, and although many bad cattle will not do the work or provide the milk that a few good ones will, they will eat far more food and so cost far more money to keep.

In the old days, cattle were counted as wealth. That day has gone. Cattle by themselves are no longer wealth, in fact they consume wealth and in return must produce wealth. The better the cattle the fewer will be needed, and the fewer cattle kept the more food there will be for them. Never keep animals which are not earning their keep ; neither you nor the country can afford it. The first principle, therefore, of good husbandry is to keep as good cattle as possible and no more than are necessary for the work which their owner has for them to do.*

Milch cattle are naturally bred near the towns, but the ideal places for breeding plough and transport cattle are the *barani* areas, particularly where the water level is high enough for fodder crops to be grown on the wells. Here cattle breeding could and should be a staple industry, and much more land and attention should be devoted to the growing of fodder crops both on irrigated and unirrigated land, leaving food grain to be imported from outside when necessary. If cattle breeding and dairying can be made profitable by improved markets for good stock and pure products, and good prices for bulls, all

To appreciate the importance of animal husbandry in the internal economy of this country an article written by Col. Sir Arthur Olver, Animal Husbandry Expert to the Imperial Council of Agricultural Research, should be read. See *Proceedings* of the first meeting of the Animal Husbandry Wing of the Board of Agriculture and Animal Husbandry, Part II, p. 268, Appendix XXV (b) (Government of India Press, 1934).

efforts to improve stock will become very much easier. In town and country alike societies, local bodies and individuals should do all in their power to assist in the encouragement of this all-important national industry, and in particular in finding money for prizes, medals and premia and for the organization of shows.

1. The improvement of cattle. The improvement of cattle, like everything else, must be done on scientific lines and in a businesslike way. There are three things to attend to*:

- (i) Food
- (ii) Disease
- (iii) Pedigree

(i) *Food.* Good cattle must have plenty of good food, otherwise the calves cannot develop properly, the cows cannot give their full milk, and the bullocks cannot work. Never forget that the underfeeding of cattle is the very worst kind of farming. It spoils the cattle, undoes all attempts to grade them up and ruins the farmer. Well-fed cattle mean better manure and more fertile soil. Well-fed calves mature quicker and therefore cost less to bring up.

The value of grazing grounds will be doubled by *watbandi*.† Silos‡ are essential in areas where well water or perennial canal water is not available to assist fodder production. Grass on hillsides and sloping land should be cut, not grazed, as grazing rapidly deteriorates both the grass and the land. Once people cut grass for stall-fed cattle instead of driving hordes of useless cattle to jostle for an entirely insufficient ration on hillsides and grazing grounds,§ they will begin to eliminate useless and superfluous beasts so as not to waste time in cutting grass for them.

* All that is said in this chapter about cattle applies to buffaloes as well, although in general more attention is paid both to their breeding and to their keep. Is this because the housewife usually looks after the buffalo?

† See pp. 54, 66, 78, 290 (17).

‡ See p. 290 (20). A silo is a pit in which green grass and fodder crops are tightly packed, and sealed with earth at the top to keep out air and water. Fodder thus stored will keep fresh for years and is the best reserve possible.

§ See p. 76.

The most difficult months for fodder are November-December and May-June. In *barani* areas the silos will be opened then. When irrigation is obtainable, the Agricultural Department can show the farmer how to raise 600 maunds of green fodder in a year from an acre of land, and how during the critical months he can have green fodder in plenty. Many farmers seem to forget that cotton seed is very cheap and is an excellent cattle food.

(ii) *Disease*. The Punjab, like other parts of India, is ravaged by all the worst epidemic cattle diseases known. Many of these could be prevented if all the new cattle bought from fairs, markets or dealers, or borrowed from other villages, were tied up separately for ten days and fed and watered separately—before being allowed to mix with the other cattle. The Veterinary Department has sera and vaccines for controlling infectious diseases, and these should be freely used, but no system of inoculation will stamp out these diseases until the villagers take the common sense precaution of quarantining cattle coming from infected, suspected or unknown environments. This is a little difficult until the village organizes itself, but so is everything else worth doing!

The District Board provides Veterinary Hospitals all over the Province. These are paid for by the villagers' taxes, and every villager should make the fullest use of them. Where the District Board cannot provide them, the people should join together and organize a co-operative Veterinary Hospital.* Co-operative first-aid for animals is organized in some districts.†

The drainage water of the village runs into ponds in which rubbish is dumped and then the cattle are expected to drink this filthy mixture! Troughs should be provided on wells, and all ponds where cattle are to drink or bathe should be embanked towards the village to keep out all water from that dirty source, and should get their water either from the canal or from the fields and jungle. Cattle require fresh air just as much as

* See p. 162.

† See p. 158.

human beings and all stables and stalls should have plenty of ventilation.

(iii) *Pedigree*. Selective breeding is the first principle of cattle improvement. Always breed from the best cows and the best bulls. Too many people breed from any cow and any bull. This is foolish. No amount of trouble and expense are too much to secure the very best bull, and the very best cows and heifers. Pedigree bulls are provided by District Boards, but they cannot hope to provide a quarter of the total number required, at the rate of at least one bull for every hundred cows. The bulls issued by the local body should as far as possible be paid for in a lump sum or in four annual payments. At the end of four years the bull should be passed on to another area, to avoid inbreeding. The village should be credited with the price at which it is passed on, and it should then take another to be similarly paid for. It is the duty of every villager to make his own arrangements for bulls.* Every big landlord must provide his own, for himself and his tenants and dependants. A pedigree bull, and, if possible, a pedigree herd of cattle should be the hall-mark of the country gentleman. The smaller zemindars must join together—nothing good can be done in a village without organization—and buy their pedigree bull, one for every hundred cows. The village panchayat or the village Farmers' Association can of course buy a bull, and so can a cattle breeding or any other form of village co-operative society.† Court of Wards Estates must of course have their own bulls. Once a landowner or a society has acquired a bull, the next principle of pedigree breeding can be observed: cows can be selected and registered, the bull's coverings can be recorded, and the progeny can be earmarked and entered in a register. Earmarking is done with a punch and tattooing ink.‡ Unless accurate breeding records are kept, the breeder can never know which are the best bulls and cows for breeding. When breeding for milk, records of the milk must be kept,*so that only the best

* See p. 15.

† See p. 159.

‡ See p. 254.

milkers may be selected for breeding. Experience in India, as in other countries, has now shown conclusively that it pays best, and is best for the herd, to wean all calves at birth and to rear them by hand, all the milk being drawn by hand from the cows, weighed and entered in a register. If the calves are not weaned at birth, the cows can be milked out and milk weighed and entered in a register on one day of each week, the calves on those days being fed on milk drawn by hand from the cow. Although the breeding of pedigree milch cattle is a separate business from the breeding of pedigree draught cattle, from the villagers' point of view 'dual purpose' cattle are a practical proposition. The average milk production of village cows can be very greatly increased without interfering with their capacity to produce good draught bullocks.

2. Cattle breeding societies.* The essentials of a cattle-breeding society are:

- (i) Registration as a co-operative society
 - (ii) A stud bull, and a stable and yard where it can be kept when it is not desired to let it run loose among the herd or in the crops
 - (iii) Elimination of all other bulls
 - (iv) A register of selected cows
 - (v) A record of coverings and calvings
 - (vi) Earmarking of cows and progeny
 - (vii) Inoculation of stock against disease
 - (viii) Special premia or prizes for the cows and their progeny, awarded according to the merit of the stock, the care and attention devoted to them, and the way the veterinary officer's instructions have been followed.
 - (ix) Milk recording is essential for grading up milk production.
- To give them funds for their operations, cattle breeding societies should levy (a) small entrance fees, (b) covering fees for cows of non-members if not of members also, (c) small fees on the birth of calves and on the sale of members' cattle.

* See p. 159.



By courtesy of Sir Alexander Tottenham, Administrator Pudukkottai.
RECLAIMING THE FIELD BY SMALL BUNDS

FLOOD RESISTING VEGETATION

A torrent bed trained, reduced to a fraction of its former size and
now carrying a permanent flow of water (See p. 58)





GOOD EXAMPLES OF CO-OPERATION

They are working together to level their fields. (See p. 57)

A valuable crop of *tana* grass on what was quite recently a sandy torrent bed. (See p. 79)



Another form of co-operative society has a milk-collecting centre where milk is bought from members and marketed either as milk or milk products, the skim milk being bought back for feeding children and calves.

It should be noted that premia and prices are far better than fixed stipends.* Once a man has got a stipend, all he need do is the minimum necessary to prevent forfeiture, and forfeiture is always a difficult and unpleasant business. Besides, no one is encouraged by someone else's stipend. But premia and prizes have to be won all the year round and will allow no slacking, as they rise and fall according to the merits of each stock owner and of his stock, and the standard of competition of the whole society.

At shows in the neighbourhood of co-operative cattle breeding societies, special classes and good prizes should be reserved for the registered stock of the breeding societies. People must be encouraged to join these co-operative societies, as without the little discipline and control they provide, accurate registration will never be achieved, and without accuracy there will be no 'pedigree' stock and the greatly enhanced market value of such stock will be lost. All possible benefits must be reserved for members and members only, and if people are not keen enough to submit to this little measure of discipline and control, they are not keen enough to be worth bothering about.

Manure pits, better stabling, silos, water supply and every other improvement in the production of food and fodder and in the health of man and beast, and in business methods, could be steadily introduced and the whole standard of farming and animal husbandry raised by the organization of co-operative cattle breeding societies and the judicious use of premia and prizes.

Co-operative cattle breeding societies should, if possible, spread out from definite centres. The bigger the area and the

* The same of course applies to squares of land given for any specific purpose.

more complete the control, the greater will be the accuracy of the records and the higher will the price of the stock rise. This may sound complicated, but it is not, if only people will organize themselves in cattle breeding or milk recording societies, and if only the bigger landlords and gentry will use their brains and their education to improve their estates. But whether complicated or not, it is the only way to secure good cattle and thereby good farms and good homes, and the quicker every villager sets about devoting his time, thought, money and labour to improving his home and farm, the sooner will the village be happy, healthy and prosperous.

3. How District Boards and district authorities can help. The District Board and district authorities can do a great deal to encourage the grading up of the cattle of their districts. For instance:

(i) The District Board in consultation with the veterinary authorities and the breeders must decide which breeds are to be encouraged in each area, and then concentrate on those selected, doing their best to avoid the mixing of breeds and the production of mongrels. A cattle survey must be made of every district and each area put into its grade. The best bulls will then as far as possible be put into the best areas, so that the best value may be got from them. The demand for stud bulls is increasing so rapidly that there are already insufficient top-grade bulls to go round. For the inferior areas, bulls are selected from the best areas, and as co-operative cattle breeding societies and registration spreads, this will become increasingly easy to do, and better and better bulls will be secured.

(ii) Existing shows should be used wherever possible for the purpose of encouraging the improvement of cattle, and where necessary special cattle shows should be organized—one-day shows in the bigger villages, carefully selected so that every village is within reach of some show, and more elaborate shows at central places. These shows can be used for all reconstruction work, and a sort of exhibition or uplift circus can go from village

to village with sports, games and cinema to add to the merriment.*

(iii) At all shows, exhibitions of cattle on the lines of the present Departmental exhibits should be organized. If well demonstrated by keen men, these exhibitions are invaluable. They show the results of careful and careless breeding, e.g. (a) good bull+good cow=excellent calf, (b) good bull+indifferent cow=fair calf, (c) bad bull+good cow=bad calf, (d) bad bull+bad cow=very bad calf, and so on, each pen of cattle teaching a definite lesson.

(iv) At shows and fairs every effort must be made to ensure that the cattle and their owners are treated well, and that good prizes are given. A common mistake is to treat the cattle—upon whose shoulders the whole of India is carried—as an unwelcome sideshow, and to make the prize-giving a hole-and-corner affair and the prizes themselves ludicrously small. Cattle judging must be a big event, and must not be done in a corner while something more exciting is going on at the centre of the show. There must be parades of cattle, good prizes, prominent positions for the owners, and everything else possible done to ensure that the breeder of a good animal shall realize that he is a somebody and that good cattle are worth breeding. Tent-pegging and other spectacular shows must be used to collect people to see and applaud the cattle and their owners.

(v) Every effort must be made to extend the establishment of co-operative cattle breeding and milk recording societies and also to encourage panchayats to undertake and to encourage cattle improvement.

(vi) The country gentry, landlords and the Court of Wards Estates must be stimulated to do their duty in this matter. A list of those who buy and keep pedigree bulls can each year be published in the district newspaper, hung in the District Board hall and in the Commissioner's and Deputy Commissioner's waiting rooms, special honour can be done, to them at shows

* See p. 213.

and public functions, annual sanads can be given them. Why should not the annual sanad for buying and keeping a stud bull be the equivalent of a District *Darbari* certificate, or carry with it honorary membership of the *Dehat Sudhar* Committee?*

The giving of *taccavi* for buying stud bulls is within the letter and spirit of the *Taccavi* Act (Act XII of 1884).

(vii) District Boards would do well to allot a fixed percentage of their income to animal husbandry, so that continuity, which is the essential element of a long-time process like cattle improvement, may be assured. Money should be provided for good prizes at shows and for the granting of premia for cattle-breeding societies.

(viii) Cattle markets should be organized to help local bodies to raise money for cattle breeding and to help breeders to get good markets and prices for their stock. Beware lest money realized from cattle markets and fairs be devoted to other objects; except for very special reasons it should be earmarked for the development and improvement of stock breeding.

(ix) District Boards should frame and enforce by-laws for the registration of approved bulls and the elimination of unregistered bulls. Some District Boards have framed by-laws, but they are not always enforced and the harm done by bad bulls is continuing. Once the provision of stud bulls is taken in hand, a castration campaign must be continually and vigorously prosecuted.

(x) Short, simple classes have been organized at the Hissar cattle farm to teach owners and breeders the principles of breeding, feeding and care of stock, and these should be taken full advantage of by landlords and stock breeders.

(xi) The organization of co-operative dairy societies† to provide the towns with milk and ghee would kill several birds with one stone. The towns are short of pure milk and ghee and the villagers, besides wanting profitable side-lines, can make good use of the separated milk. This contains all the protein

and mineral salts and much of the vitamins which are the most valuable nutritive constituents of milk, and are particularly valuable for the proper development of children. Dairy societies would help to grade up milch cattle. The dairy societies must join with the town health authorities in 'Drink More Milk' and 'Buy Pure Milk and Ghee' campaigns. If possible, consumers also must be co-operatively organized.

4. How municipalities can help.* Municipal committees should do all they can to help. The aim of every town authority should be to remove all cattle outside the limits of the town, but this is impossible till dairying is organized in the villages round about and the sale of milk properly controlled in the town, so that pure milk at a reasonable price is readily obtainable. Some town committees run cattle fairs, but few devote the profits to improvement of the ghee and milk supply, by such means as (i) finding money for stud bulls in the villages round, (ii) establishing testing stations for milk and ghee, (iii) improving the marketing arrangements for milk and milk products, (iv) encouraging the formation of co-operative societies (a) of consumers in the town, and (b) of producers outside, and (v) encouraging the people to drink more milk and to insist on pure milk and ghee. Vegetable ghee does not possess the valuable feeding properties of pure ghee manufactured entirely from milk.

5. Covering fees. Covering fees are rather a vexed question. Some people think they discourage the use of good bulls or have the effect of restricting their services to well-to-do villagers. But *mirasis* and others charge and receive good fees for the stallions they keep. Why should not a small fee† be charged for the services of a stud bull? Once this custom became established—it is already in force in some areas—the keeping of pedigree bulls would be a self-supporting business, and half our difficulties in cattle improvement would at once disappear. Co-operative

* See pp. 237, 258.

† See p. 15.

societies should charge covering fees from non-members while the bulls are free or at reduced rates for members. Panchayats, if they wished, could either levy a small bull cess on all cows or charge covering fees. The latter is the better as it will assist the recording of coverings. The charging of fees would help to solve the problem of feeding and housing the stud bull. The panchayat or the society or the village or landlord responsible for the bull should undoubtedly provide a stable and a small yard where the bull might be confined at night and at other times when it is not advisable to let it roam in the fields or with the herds.

6. Export trade. There is a very flourishing export trade in cattle from some tracts, and people suggest that it should be stopped, for fear that the best cattle will be exported and lost to the area. To kill such a profitable trade would, of course, be sheer madness. If there is any danger of losing the best breeding stock, then the duty of those interested in the prosperity of the area is (i) by properly organized publicity to warn breeders against selling the geese that lay the golden eggs, i.e., their best cows, and particularly pedigree cows; (ii) to found cattle breeding societies and to start pedigree herds; (iii) to organize cattle shows; (iv) to raise money for prizes and premia, and (v) to do everything else possible to popularize the keeping and breeding of good stock and to raise the price in the locality of first-class breeding stock. It has been suggested that a small cess on exported cattle would provide the nucleus of a fund which could be most usefully spent in helping and improving the industry in every way possible. The bringing back of exported cows to the breeding area when they are dry has been suggested, but this probably would be no help to the industry.

CHAPTER IX

HEALTH

THE village should be a very healthy place, and, given steady work and mutual goodwill, most of the disease and ill-health it now suffers from is easily preventable. If you run your eye down the tabulated list of diseases in a rural dispensary you will find that well over half are caused by dirt; the absence of light and air are responsible for a lot more, then malaria and its by-products, and finally, absence of the knowledge of how to plan and cook a balanced diet.

Light, air, and cleanliness are the three foundations of good health. A few annas will buy the Punjab standard ventilator, and cleanliness is just hard work and organization. The details are dealt with in the chapter on Home and Village.

1. Cleanliness. Many people think that cleanliness is the whole of Rural Reconstruction. It is not so, of course; there are plenty more things besides, as this book tries to show, but so important is cleanliness that it might well be the whole programme both of better towns and of better villages.

Cleanliness is the beginning of good health and is therefore one of the main ingredients of happiness. Without cleanliness the children cannot hope for good eyes, without cleanliness the fields will go short of manure.

Cleanliness means self-respect and it means self-control, and discipline and corporate effort, and these four things are the basis of civilized life. The teaching of clean, tidy and regular habits is the basis of the character-training which first the mother and then the school should impart to every boy and girl in the land.

Cleanliness is a great tonic. The first thing that is done to a patient when he comes to hospital is to wash him and put him into clean sheets. The first thing done to a recruit in the army is to teach him to be clean.

Cleanliness of body and of environment brings alertness of mind. The neglect of it means dirty, untidy villages, slovenly farming and unwooded fields, squalid, careless and apathetic villagers. Cleanliness is the acid test of culture and of civilization, and is the greatest educator of mankind that has yet been devised.

When, therefore, cleanliness is stressed, remember that it is the foundation of all progress both in town and country and that whatever your duty or calling, cleanliness comes first, last and all the time, cleanliness of mind, body, clothes, home—and all that is in the home—drinking-water, streets, village and fields.

2. Food and other necessities. Good food is another element of good health. The villager will have a better diet when he pays the attention he should to fruit, vegetables, honey, and poultry, and when in general he works early and late and devotes the whole of his time, attention, labour and capital to getting all he possibly can out of his land, instead of trying to raise his crops with the minimum of physical and mental effort. The feeding of the children is the job of the mother, and a lot of knowledge of this most important part of home-keeping is handed down from mother to daughter. There is, however, a lot more to learn about food values and cooking which can only be acquired by special study and teaching.

The women already keep their homes spick and span, their kitchens are spotlessly clean, and all their pots and pans are polished till they shine. When they add to all this a knowledge of simple hygiene, and learn what mischief flies, rats, mice and other creatures can do, and how drinking-water is contaminated and with what results, there will be much less sickness in the village.

Malnutrition is a big cause of disease in the Punjab but it is by no means always the result of poverty. It is often due to ignorance, carelessness, idleness, or a false pride which prevents the farmer growing vegetables.

Good, clean, well-cooked food and water are well within the reach of most Punjab villagers, if they will make up their minds to the continuous and careful effort necessary to obtain them, and see that the housewives get the knowledge they need of food values and of how to cook all kinds of food without reducing their food value. A surprising amount of good vegetables could be grown in every village if only the waste-water from house, well, mosque and everywhere else were used to grow them in small patches wherever a yard or two of land could be found.

The housewife must, of course, keep a few simple medicines, but until she has had some training this will be difficult.

Whenever a doctor examines schoolchildren he finds a very high percentage of them defective in some way or other and many of them in several ways. These defects if tackled in childhood can often be corrected, but if allowed to remain will be a life-long handicap. The medical examination of schoolchildren costs money and parents must be taught to pay* the small sum necessary—only an anna or two a month and to carry out the doctor's instructions, carefully and continuously, whenever he advises any kind of treatment. It is both cruel and stupid not to find the small sum necessary for regular examination and treatment of one's children and not to insist on doing all possible to rectify any defects which the doctor finds. Malnutrition is painfully common in children and often due not to poverty but to ignorance or carelessness. The housewife must learn all about the protective foods and must see that her children get a good square meal before they start for school in the morning and take a good midday meal with them.†

3. Diseases. *Back to nature.* In a general way all diseases and pests, whether of man, beast or plant, are the protest of nature against unnatural treatment, either a dirty environment, a shortage of food—including, of course, light, air, and water—or the wrong kind of food. Crops will resist insects, drought, frost and all other enemies much better in well-ploughed, well-

See p. 15.

†. See p. 167.

manured, well-watered and well-weeded soil. Animals kept in clean, airy stables and given plenty of good fodder to eat and clean water to drink will resist disease far better than half-starved creatures kept in dirt and darkness, and drinking a filthy mixture of sewage and water. Human beings will resist disease far better if they live in clean, airy houses and are fed on a clean well-cooked and well-balanced diet. The much dreaded epidemic diseases of cholera, plague and smallpox should have few terrors for the careful villager. Enteric is another disease which thrives in an environment of dirt and carelessness. Flies must be reduced to a minimum by the 'pitting' of all rubbish and refuse and by the use of latrines. Food, of course, must be kept covered. The well-trained housewife will see to it that the food and water are clean and uncontaminated. Vegetables and fruit must be fresh and clean. There are painless inoculations to keep off enteric, plague and cholera. Hookworm is spread by the habit of using the ground round the village as a latrine, and the remedy is proper latrines. Guinea-worm is spread by using dirty water for drinking purposes.

In a few areas water supply is an engineering problem requiring large sums of money, but where there are wells the water can and must be kept pure by following a few simple instructions.* Where it is necessary to use tanks they must be kept as clean as possible by keeping cattle and animals away—these must have their own separate tanks—and by keeping village water out of them and seeing that jungle water only is allowed to get into them.

Vaccination, and re-vaccination every six years—or sooner if careless neighbours cause an epidemic—combined with light, air and cleanliness will keep smallpox away.† To make vaccination systematic and to avoid re-vaccinating the same willing people year after year while others escape altogether, village vaccination registers are advisable, kept by some reliable person or authority, resident in the village. Schools, of course, should

* See p. 38.

† See pp. 290 (3), 294 (6, b).

have their own vaccination registers kept by the school staff.

Plague is primarily a rat disease and its prevention is just a question of getting rid of rats. Rats hate light, but still more, the well-lighted house shows the rats up, and rouses the householder to get rid of them, by cats, traps or poison, and to seal up their holes. Boxes and grain-bins should be raised high enough off the ground to prevent rats making their homes beneath them.

If a plague epidemic threatens, mass inoculation is the only safeguard. Evacuation of the village is a broken reed. Once the people are scattered in the fields it is impossible to round them up for inoculation. They run away and hide in the corn and neither parents nor village elders can be sure that when the doctor comes there will be no absentees. Meanwhile, people find that the nights are colder than they expected and back they go for blankets; the housewife goes back and rummages for something she left behind; and they soon bring the plague with them to their new camp.

Tuberculosis is a disease of civilization: here 'Back to nature' is peculiarly applicable. Fresh air day and night, and fresh, natural, unsophisticated food are complete preventives. Not every villager suffering from tuberculosis can hope to get to a sanatorium. But the villager can do several things. (i) He can get the patient and all his household examined by the doctor to find out who are actually infected and what is the best that can be done for them. (ii) Those actually suffering can then be as far as possible segregated by day and by night from each other and from the rest of the family. The best place for them is an airy *chappar* (shed) on the roof, with plenty of blankets in winter. (iii) Good food, rest and fresh air is all that can be done in the village for the patients, but these are the principal things in any treatment of this disease. (iv) If a patient must enter the same room as anybody else, see that the room has ample light and air. (v) The patient's sputum should invariably be deposited in a

receptacle kept for the purpose and should be carefully burned. Even a cigarette tin will do, or a broken crock. Remember that nature puts up the most vigorous resistance to tuberculosis and given a fair chance will win. So don't attempt to hide the disease. At the very earliest suspicion go, or take the patient, to the doctor and find out the best or the worst, and do what the doctor advises. It will save money, it will save suffering and trouble, it will save life. There is a very great deal of hidden or unsuspected tuberculosis in town and village alike, and if only you will help to search it out, segregate the sufferers and remove the conditions which produced it, you will be doing a very great deal to check the spread of this scourge.

Malaria is more difficult. Some of the unnecessary collections* of water that might breed mosquitoes have been dealt with in pp. 39-41. Even a broken potsherd will hold enough water in the rains to spread malaria! The housewife must see that none can breed in her water pots; every week these must all be emptied. Every sort of depression must be watched and if it can't be filled, it must be drained or oiled. Borrow-pits for roads and other earthworks are favourite breeding places and must either be connected up with each other and drained or treated with oil or Paris green during the mosquito season. They must never be dug near human habitations. Even so, do what we will, mosquitoes will turn up from somewhere, so that mosquito-nets are not luxuries but necessities for the wise villager.† One good dose of fever during sowing or harvest time costs more than a net each for the whole family. Don't think that one net, for the breadwinner, is enough. Everybody must have one. The mosquito's first choice is the children, and once there is any one in the compound

* The deep village pond does not usually breed malarial mosquitoes; but shallow pools and edges are favourite places for their larvae and they must be kept free of grass, weeds and puddles. So must wells and canal channels in the neighbourhood of villages and farms. See also pp. 287, 288, 294 (a, b).

† Good cheap mosquito-nets are made by co-operative societies of weavers and sold by the Industrial Assistant Registrar of Co-operative Societies, Lahore.

with malaria germs in his blood, all are in danger. The mosquito gets his poison from the blood of someone with fever, or who still has the germs in his blood. Once, therefore, you have a fever patient in the neighbourhood, you may be sure that the mosquitoes will find an opportunity of biting him. That will put the poison into the mosquito, where it will develop, and sooner or later the mosquito will find his chance to pass the poison on. So everyone must be netted, particularly, of course, any one who has, or recently has had, malaria. In fact if there is a shortage of nets, use them first for those who have the germs in their blood, so as, if possible, to prevent the mosquitoes being able to get any poison to infect others with. Remember one thing: a mosquito cannot pass on the poison until it has been inside its body for about ten days. This gives you ten days in which to catch the mosquito after it has picked up the poison. If, therefore, you make a point of killing, every day, every mosquito you can possibly catch, you will be pretty certain of catching any malaria-infected ones there may be, before their ten days are up and they can pass on the infection. There are many ways of catching mosquitoes. *Fūt* costs a little money but not as much as malaria. Teach the children to soap their hands, shake the curtains and stir up all the likely sleeping-places, and then catch the mosquitoes on their soapy hands as they fly out. There are various kinds of traps, too, which your Health Officer will tell you about. The anopheles or malaria-carrying mosquito stands on his head when at rest and the culex or harmless one sits at rest in the shape of an arch. Their larvae in the water, however, are the reverse. The anopheles larva lies flat below the surface of the water and the culex larva lies at an angle. When in doubt, destroy them all! Every villager should be able to recognize them both at sight in both states, and so should every rural worker, gazetted, non-gazetted, official or non-official.

Quinine, of course, every home must stock. Don't wait for free issue. Buy and keep it yourself just as you keep pepper

receptacle kept for the purpose and should be carefully burned. Even a cigarette tin will do, or a broken crock. Remember that nature puts up the most vigorous resistance to tuberculosis and given a fair chance will win. So don't attempt to hide the disease. At the very earliest suspicion go, or take the patient, to the doctor and find out the best or the worst, and do what the doctor advises. It will save money, it will save suffering and trouble, it will save life. There is a very great deal of hidden or unsuspected tuberculosis in town and village alike, and if only you will help to search it out, segregate the sufferers, and remove the conditions which produced it, you will be doing a very great deal to check the spread of this scourge.

Malaria is more difficult. Some of the unnecessary collections* of water that might breed mosquitoes have been dealt with in pp. 39-41. Even a broken potsherd will hold enough water in the rains to spread malaria! The housewife must see that none can breed in her water pots; every week these must all be emptied. Every sort of depression must be watched and if it can't be filled, it must be drained or oiled. Borrow-pits for roads and other earthworks are favourite breeding places and must either be connected up with each other and drained or treated with oil or Paris green during the mosquito season. They must never be dug near human habitations. Even so, do what we will, mosquitoes will turn up from somewhere, so that mosquito-nets are not luxuries but necessities for the wise villager.† One good dose of fever during sowing or harvest time costs more than a net each for the whole family. Don't think that one net, for the breadwinner, is enough. Everybody must have one. The mosquito's first choice is the children, and once there is any one in the compound

* The deep village pond does not usually breed malarial mosquitoes; but shallow pools and edges are favourite places for their larvae and they must be kept free of grass, weeds and puddles. So must wells and canal channels in the neighbourhood of villages and farms. See also pp. 287, 289, 294 (6, b).

† Good cheap mosquito-nets are made by co-operative societies of weavers and sold by the Industrial Assistant Registrar of Co-operative Societies, Lahore.

with malaria germs in his blood, all are in danger. The mosquito gets his poison from the blood of someone with fever, or who still has the germs in his blood. Once, therefore, you have a fever patient in the neighbourhood, you may be sure that the mosquitoes will find an opportunity of biting him. That will put the poison into the mosquito, where it will develop, and sooner or later the mosquito will find his chance to pass the poison on. So everyone must be netted, particularly, of course, any one who has, or recently has had, malaria. In fact if there is a shortage of nets, use them first for those who have the germs in their blood, so as, if possible, to prevent the mosquitoes being able to get any poison to infect others with. Remember one thing: a mosquito cannot pass on the poison until it has been inside its body for about ten days. This gives you ten days in which to catch the mosquito after it has picked up the poison. If, therefore, you make a point of killing, every day, every mosquito you can possibly catch, you will be pretty certain of catching any malaria-infected ones there may be, before their ten days are up and they can pass on the infection. There are many ways of catching mosquitoes. *Flit* costs a little money but not as much as malaria. Teach the children to soap their hands, shake the curtains and stir up all the likely sleeping-places, and then catch the mosquitoes on their soapy hands as they fly out. There are various kinds of traps, too, which your Health Officer will tell you about. The anopheles or malaria-carrying mosquito stands on his head when at rest and the culex or harmless one sits at rest in the shape of an arch. Their larvae in the water, however, are the reverse. The anopheles larva lies flat below the surface of the water and the culex larva lies at an angle. When in doubt, destroy them all! Every villager should be able to recognize them both at sight in both states, and so should every rural worker, gazetted, non-gazetted, official or non-official.

Quinine, of course, every home must stock. Don't wait for free issue. Buy and keep it yourself just as you keep pepper

and salt. It is quite cheap, and more important than many of the things you regularly buy for household use. The doses are eight or ten grains twice a day for men, five or six for women and one or two for children. Post-offices sell six three-grain tablets for one anna.

The large scale diffusion* of quinine among the rural population is a tough problem. They have had free quinine and now will not buy it. Doubtless many are too poor to buy, but there are plenty who can buy, and it will be time enough to bother about those who cannot when all those who can have got their bottle of pills in the cupboard, and the traditional generosity of the villager has given what he feels inclined to give to his poor neighbour or dependant. At present it is fashionable to accept free quinine. It must be made fashionable to pay, to be beholden to no one for such necessities.† The easiest way to do this would be to stop entirely all free quinine, and use for free distribution the quinine alkaloids. They are even more nasty than quinine, they are a dirty brown colour, but in slightly larger doses they are just as good for curing malaria, and finally they are cheaper. They are ideal for free issue to the poor and needy, and who but the genuinely poor would touch the stuff? Adopt this policy and it would immediately become the fashion to stock pure quinine and to parade the fact that we have it. Snobbery? Of course it is, but need that trouble us if we can thereby defeat malaria? Meanwhile, of course, a good brand of pure quinine must be on sale in every village, with a Government guarantee behind it, and sales must be popularized by every means that Government, local bodies, the trade, and organized philanthropy, all working together, can devise.

4. *Eyes.* The amount of suffering and harm caused by eye-trouble is appalling. Nine-tenths of it is due to dirt or to carelessness, and is therefore easily preventable. Most of the mischief is done in childhood, and most of the pain is suffered by children. This makes it all the sadder, as the poor children

See p. 252.

† See p. 15.

‡ See p. 290 (10).

are not to blame, it is their parents who are responsible for all this needless pain and suffering. The harm done lasts throughout life, and there are blind and damaged eyes in every village.

There are a few simple things to remember about eyes and if they are carefully acted on most of the trouble will disappear.

(i) *Dirt* is the main cause of all eye-troubles. If the village is dirty, dirt will blow into people's eyes, and children playing in the dirt, for want of a clean place to play in, poor dears, will get more dirt in. Dirty villages breed swarms of flies. Flies are the best agents for giving and spreading eye diseases (and for that matter, all other diseases). Flies delight to sit on children's eyes, particularly diseased eyes, and dirty children's eyes. When eyes hurt or get dirt into them, both children and parents will rub them with dirty fingers, dirty rags, dirty clothes. And so it goes on. The number of permanently damaged eyes in a typical old dirty village is big enough to make the angels weep. I once visited a village where I could not find one single pair of sound eyes among the children.*

The remedy is cleanliness, clean villages, clean children, clean clothes, clean eyes, clean faces. Children and their clothes must be regularly washed, eyes must be washed several times a day with clean water, as a matter of course, and at all other times when they get dirt or dust into them.

(ii) *Doctors*. Eye diseases, and injuries to eyes, require doctors. You cannot treat eyes at home. You can and must keep eyes clean at home, but for treatment you must take them to the doctor. God will not give your children a second pair of eyes, so take no risks with the first. At the first sign of trouble away with them to the doctor. He is paid for out of your taxes, and let us hope out of your subscriptions too, so the more use you make of him the more value you are getting for your money.

Avoid quacks and quack medicines and charms, whether for eyes or for any other disease or trouble.

* On the other hand I know villages with a perfect system of manure pits (the Ingram-Skinner Estate in Gurgaon District) where you will not find a single bad eye.

(iii) *Eye diseases are catching.* Eye diseases, particularly when the eyes are red, inflamed or discharging, are very catching. They can spread from eye to eye and from child to child, until whole families and whole villages are infected. So never rub two eyes, even belonging to the same child, with the same finger or cloth or rag, or cotton wool, and never use a *surma** rod for more than one child (*surma* is good but every child must have its own rod).

Never let children with red or discharging eyes go to school or stay in school, and if you possibly can, segregate them from all other children, and don't even let them play with other children till their eyes are well again.

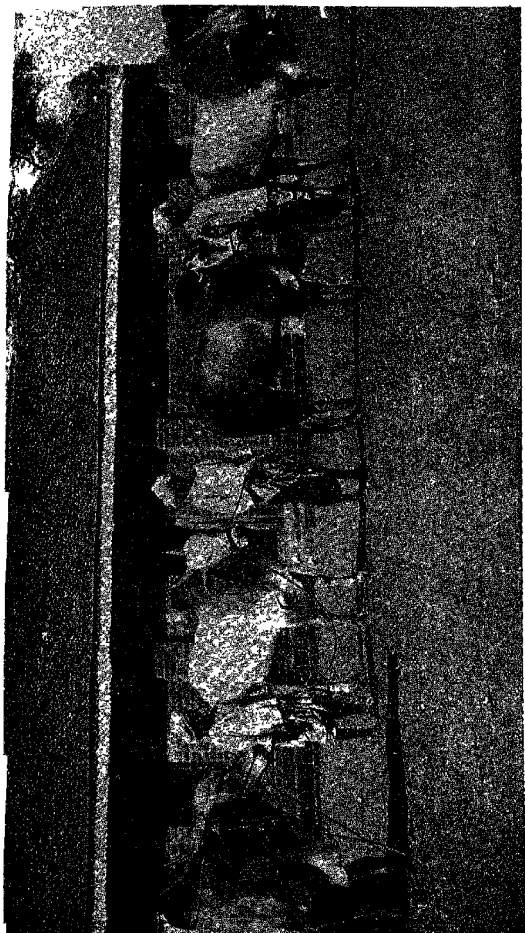
(iv) *The cleaning of eyes.* Until red or discharging eyes can be treated in hospital they must be kept clean and the discharge not allowed to collect in the eyes, as it will attract flies.

The washing of eyes must be done with clean water, clean hands, clean cloth, clean towels. Cold weak tea, or salt and water, are safe eyewashes.

To wipe the eyes, use clean cotton from the fields. Boil it in water, let it cool, and then keep it in a covered vessel. Use each bit once, and for one eye only, and then burn it. The salt solution is one teaspoonful of clean salt to one pint of boiling water. Allow it to cool, of course, before using it.

At night time a drop of castor oil put into the eye will prevent the lids from sticking.

(v) *The rural dispensary.* For eye diseases (and for all other diseases too) the village must keep in touch with the nearest dispensary. The schoolmaster, a lambardar, or some other good citizen should make up parties of children, and take them to the doctor if the hospital is within reach. If not, arrange with the doctor to visit the village, and have every one who should see him ready when he comes. Include in the party all children who cannot see the black-board or their lesson books properly, all children with squints, or bad eyes of any kind. And while you





THE VILLAGE RADIO

THE VILLAGE LIBRARY AND READING ROOM (See p 142)



are about it include in your hospital party all sufferers from every kind of disease and ailment. Why not make the fullest use possible of the doctor and try to reduce all preventable or curable suffering in your village to a minimum?

(vi) *Newborn babies.* Every baby, as soon as it is born, must have a drop of one per cent solution of silver nitrate put into each eye to avoid neo-natal ophthalmia. Certificated dais are taught to do this, so never call any other kind of dai.

Vaccination and re-vaccination will remove yet another cause of possible eye-trouble.

(vii) *General.* Ventilate your houses. Have proper chimneys for all fires, as smoke is very bad for eyes.

Milk, fruit and vegetables are the foods to build strong healthy bodies, and with them strong healthy eyes.

So much for the eyes. I have given them several pages and they are worth quite that. Remember! Cleanliness and again cleanliness—chimneys—eye disease is catching—doctors not quacks—and the quicker you get eyes treated the less chance of permanent harm.

5. Organization. Curative and preventive health services are very difficult to organize in our innumerable villages. We have a network of dispensaries with the nearly achieved ambition of having them not more than ten miles apart. But the more ill a man is, the harder is it to move him;* rural doctors sit partially idle at their dispensaries although between them and the next dispensary there are enough sick people to keep several doctors working overtime, villagers would rather die than pay the small fee the doctors are entitled to claim for visiting them at home, and private practitioners can't or won't build up village practices. The village with a dispensary is too often no cleaner or healthier than the village without one. If an epidemic starts in a village, it may be a week or more before it is discovered and then it is too late to stop it spreading. Except in the imme-

* A light ambulance with bicycle wheels which one man or a Boy Scout can push has been designed, and is being marketed in Lahore by R. S. Janki Des, cycle-maker.

diate vicinity of a dispensary the school-children are without any hope of medical inspection or follow-up treatment. Meanwhile the women demand female doctors for their particular troubles, while there are practically no female doctors in any rural dispensaries, an entirely inadequate supply of female doctors in the province at large, and the few there are are extremely difficult to post in rural areas. A certain number of dais are being trained, but there is no one to exercise any adequate supervision of them after they receive their certificates, or to prevent untrained dais from continuing to practise.

Finally our finances have been nearly exhausted in providing these curative rural centres—and even they are entirely insufficient—and the preventive service has to consist of a District Health Officer—a very few Sanitary Inspectors, Vaccinators and small gangs of workmen. And yet curative work alone will never raise the general level of health. The causes of diseases must also be systematically attacked. Curative work without preventive is rather like plugging the leaks in the ceiling below without sending someone upstairs to stop the hole in the bath-pipes! But how can the curative work be withdrawn and replaced by preventive, once it is established and the sick and suffering are coming for treatment. So far from reducing curative work, as rural welfare spreads and the people become more health conscious, more and better curative services will be wanted.

What is the remedy for all this? Several things seem obvious:

- (i) More money must be found, and to do that those privileged persons—principally males, of course—who now absorb most of the funds available for the relief of human suffering, must somehow be got to pay according to their means for attendance and medicines.
- (ii) More female doctors must be made available for the village women.

(iii) Preventive and curative work must be combined and rural doctors must tour.

(i) *The payment of fees.* The second point is dealt with on p. 135. As for the unwillingness of even well-to-do people to pay for doctors and medicines, let us say at once that it is not due to any innate meanness. There is plenty of charity about, but most of it goes into traditional channels which many of us consider either out of date or unworthy. Mission Hospitals have little trouble in obtaining payment for services rendered. These are perhaps the five main reasons for the reluctance of patients to pay for medical services.

- (a) Free treatment, free quinine, free everything has been lavished indiscriminately upon the people, with the notion—entirely incorrect as it is proved—that once they had learnt the value of these things they would gladly pay for them. The only result has been pauperization, and ever less willingness to pay.
- (b) Government servants receive free medical aid and a lot of other free things as part of the conditions of their service. As Government service is everyone's ambition and sets the standard in nearly every direction, it has become the hall-mark of social status not to pay one's way but to get things free!
- (c) Payers of land revenue and local rate say that as medical aid is provided out of their taxes, they have every right to be on the free list. Quite logical in its way, but logic won't help to spread medical aid; and without fresh sources of money no more expansion is possible, which means that the women are going to be neglected for ever as the men have taken the first and the lion's share of what money has hitherto been available.
- (d) No real effort has ever been made to teach the necessity of paying for doctors and medicines.
- (e) That intangible thing called 'service' is not always conspicuous in Government dispensaries and hospitals.

Whatever the cause, there is intense opposition to payment. Quite apart from the necessity for more money to extend medical relief among women and children, if doctors had to visit private houses free, they would be harried unmercifully.* The non-paying mentality must somehow be defeated. It must become a matter of honour among all classes to pay whatever they can reasonably afford, and public opinion must be heavily on the side of payment.

In a co-operative hospital—this system has been greatly elaborated in Czechoslovakia and in Japan—payment is easily arranged. The doctor visits all members on demand and sends his account to the society and not to the patient. It is for the society to debit each member with the amount he should pay and to settle the proportion which the doctor should receive in addition to his salary.

The co-operative movement and the panchayat system should obviously be brought into the medical aid business, and whether they merely organized an afternoon clinic for the doctor to visit, or (perhaps in combination with the subsidized practitioner system) had a full-fledged dispensary, they might be able to establish the habit of paying for attendance and medicine. The doctor would be employed by the panchayat or co-operative society which would fix (and collect) fees, and assess paying capacity and the proportionate rates for those who belonged to the panchayat area or were members of the co-operative society, and for outsiders.

As another way of developing payment how would it do to hand over the medical work of an area—subject to the existing system of supervision—to the local branch of the Red Cross along with the public funds it now receives? People who were ready enough to accept charity from public funds might hesitate to sponge upon a local society which was raising locally all the money needed for improvement and expansion.

* Lady doctors are ^smore victimized than men by patients who can but won't pay.

Some rural doctors have been able to raise considerable sums locally for the improvement of their dispensaries and it should not be difficult for an active local committee or almoner to get people to contribute at weddings and on other social and special occasions.

As for fees, the doctor should have nothing to do with this side of the business. The local committee, co-operative society, or panchayat should assess and collect all dues, whether for dispensary or home visits or for medicines, giving the doctor whatever is his share of the fee for the home visits. To encourage payment, dispensary tickets are sometimes issued on payment of a nominal sum; it would be better if even this, too, could be done by the local committee, which is better qualified than the doctor to say who can and who can't pay, and to establish the custom of paying. Sooner or later the doctor is bound to be in trouble if he is expected to demand payment or to withhold treatment from those who refuse. Somehow or other, by co-operative societies, committees, panchayats, almoners, or in whatever other way is found best, the public must be trained both to pay according to their means for medicines and treatment, to subscribe to hospitals, and to make full use of the medical services.

(ii) *Curative and preventive.* There are plenty of arguments against combining preventive and curative work. The curative work is popular and will absorb all the time and attention of the staff. No one can do justice to both sides. The doctors will have to serve two masters, the Civil Surgeon and the District Health Officer.

The arguments in favour of it, however, are final. There is not enough money for a double service, and even if rural doctors could be doubled there would still be more than seven miles between their dispensaries!

Something on the following lines seems to be the best line of advance:

Let the rural doctors be given sufficient training in preventive

work, not merely to pass examinations, but to give them a conviction of its value and necessity and to enable them to carry it out efficiently. Let the rural doctor have under him a Sanitary Inspector and whatever vaccination staff, gangmen, etc., can be found. Lay down carefully exactly what his duties on the preventive side are to be. Let him do his morning clinic at his dispensary and then on five afternoons a week, let him tour. He will have a certain number of regular village out-clinics at fixed times and places, and for the rest he will tour generally as required for preventive and curative work. He will have the subordinate preventive staff to carry out inspections, disinfections and do other necessary work under his general guidance. These fixed out-clinics will, in time, we hope, by the efforts of panchayats, co-operative societies and other philanthropic persons or bodies, acquire permanency by the provision of buildings, resident staff such as nurses (male or female) or compounders, equipment and medicines. Subsidized private practitioners will begin to take them over while the central dispensary becomes more of a cottage hospital with outlying feeders. The rural dispensaries, with the help of ambulance lorries, will feed the tahsil hospitals and so on up to the big central institutions. As for supervision, the co-ordination of the two services, curative and health, will have to be so close that in practice if not in theory, both at provincial headquarters and in the district, they will constitute a Health Board issuing joint orders for both branches of their work and loyally backing each other up on their tours of inspection.

By the nature of their work, the chief curative doctor of the district spends most of his time at his headquarters and in his central hospitals, while the chief preventive doctor spends most of his time on tour, but that is no reason why, given loyal co-operation, either branch should suffer in the rural areas.

The family doctor is, and always will be, the best domestic health officer. He has opportunities, denied to everyone else, of discovering and correcting defects in nutrition, cleanliness,

ventilation, vaccination and all the other elements of good health. Most of our ill-health is the result of very simple causes, dirt, darkness and malnutrition. It does not take a highly trained doctor to see about pits, ventilators, drains and well-tops.

Voluntary social workers (particularly lady workers) can, under the guidance of the doctor, do a very great deal of preventive work. A working mason can help with well-tops, drains and ventilators. A trained agriculturist can help in teaching the growing of protective food. There is still plenty for the doctor to do, of course; the detection of communicable diseases, the discovering of causes, and the direction and supervision of the efforts of the lay workers. His curative powers and his general education and culture will help to spread confidence among the villagers and obtain their co-operation in carrying out the simple things that will make so much difference to general health.

Such a combined service based on the rural doctor seems to be the best and cheapest line of attack upon dirt, disease, malnutrition and epidemics in our villages.

(iii) *Health units.* Health units complete with curative, preventive, maternity and welfare services are very valuable for research and training purposes, but as models for general imitation, their cost makes them prohibitive. Instead of planting on the people a full-fledged service which is quite beyond their knowledge and recognized needs, and hoping—contrary to all our experience—that one day they will appreciate it sufficiently to pay for it, it is better to start from the bottom and build up the service as the people feel the need of it sufficiently to be ready to contribute to its cost. For instance, it might start with trained dais followed up with an occasional visit from the lady doctor, leading on to a regular clinic and then a dispensary with a maternity ward, health workers and so on. A close network of panchayats and better living co-operative societies could soon be taught to want and to pay for an increasing number of their social needs and ameni-

ties, but not to pay a sum equal, per head, to the average incidence of the land revenue, for a complete health service, the need for which they had never felt.

CHAPTER X

WOMEN'S WORK

1. THE HAND THAT ROCKS THE CRADLE

A VERY big effort is being made to improve every aspect and outlook of village life and to give every villager, from the cradle to the grave, a better chance. Practically the whole of our efforts, however, are directed to one-half only of the population of each village, as very little that we do at present has much reference to the women. And yet for our purposes they are the more important half of the population! It has been estimated in a European country of smallholders—such as the Punjab is in India—that seventy per cent of village life depends on the women. The man is busy with his farm, but upon the woman depends whatever value is got out of the crops and money he brings home for the family.* Upon the housewife's knowledge, thrift and skill depends the feeding, clothing, health, comfort and happiness of the home and, greatest of all, upon her capacity for bringing up and training her children depends the whole future of the State.

And yet we continue to neglect her!†

The heartbreaking disappointments that we experience in village work are all due to this fundamental error of thinking that the interest and attention of the women is unnecessary for the organizing of a social and economic revolution—for the 'uplift' movement is nothing less!—in village life. Better farming, better homes, better business is our motto, but how can a smallholder achieve any of these three ideals if his wife is not joining in as an active and intelligent partner?

How often do we address a meeting of men upon some perfectly

See p. 24.

† Even the parents often neglect their girl babies.

obvious reform and curse what we think is their amazing stupidity because they do not immediately agree with our simple suggestions? How can they agree until they have gone home and talked it over with their wives, upon whom in nine cases out of ten will fall the brunt of carrying out the reform we suggest? Custom and tradition are in the hands of the women, and until they agree to changing them the men are helpless. Why should they allow changes until they are educated to realize the necessity for them in the changed circumstances of modern life?

Where does all the school training in hygiene go to? Why is it not reflected in cleaner, healthier towns and villages? Because in the little actions of daily home life children copy their mothers and their grandmothers, not their schoolteachers and scoutmasters! The most important years for training and character-forming are the first six, and the whole of that time is in the mother's sole charge.

Why are dirty towns and dirty villages tolerated? Why is there no civic sense, no public opinion to insist on something being done? Because the women do not know what can or should be done.

In most of the important things in village life, the women are as much concerned as the men, if not more so.

Health and housing are obvious. Consider farming. What is the use of better crops if the housewife does not know how to make the best use of the increased money and produce which the farmer brings home? A well-trained and thrifty housewife with an old-fashioned farmer for a husband will make a better home than an up-to-date farmer with a wasteful and ignorant housewife. Our whole aim is happier homes—better crops and better everything else are only a means to this great end.

Consider thrift, saving, extravagance, waste, debt, and all that. Until the goodman stops living on a running account at the shop, until his wife stops buying by barter,* and until both pay cash

* See pp. 222, 224.

for everything and either keep a savings bank account or belong to a co-operative society, the villager will always be wasteful, extravagant and in debt. But how will this ever come about until the housewife holds the purse and keeps the accounts, and how will she ever be fit to do that until she can read and write, and has some training in accounts and housekeeping; until, in fact, the girls go to school and we can have some centre like a Women's Institute in every village, which will radiate light and guidance into the homes of the villagers?

Consider violent crime. It is absurd to suppose that the Punjabi is violent merely because he is virile and martial. There are plenty of virile and martial races in the world whose villagers do not fill the prisons of their native lands. Elsewhere, the peasant is a quiet, God-fearing fellow. Why not in the Punjab? Because the Punjabi is not taught self-control when he is a child, and who else can teach self-control but the mother,* and a mother who has herself been trained? What are dirt, lying and the giving and taking of bribes due to but false notions of *izzat*, and the absence of self-respect? And who can teach self-respect but the mother? Regular feeding from birth, clean and regular habits, a clean tongue and a truthful tongue, these are the foundations of self-control and self-respect, and it is this training that is missing in the Punjab because no one but the mother can give this training and not even she can do it until she has herself been trained, and has been given her proper position in home and village.

One of the greatest problems of boys' elementary education is the way in which they forget all they have learnt when they finally leave school. If their mothers could interest themselves in their sons' studies this would never occur. No one has yet heard of the sons of literate mothers lapsing into illiteracy!

We have tried to show elsewhere that the foundation of all progress is a desire to raise the standard of living.† But the standard of living is the standard of the home, and in all countries

See p. 293.

† See pp. 1, 5, 19.

it is woman, the housewife or *gharwali*, upon whom the home principally depends. Village uplift is a joint effort of both partners of the home. How can the man alone form and carry out the ambition to improve his home when his wife who is mainly responsible for that home is completely without the inspiration to do so and has no understanding of or share in her husband's ambition? The desire to rise must come from the home, and the home-keeper must be equally fired with it before we can expect villagers of their own initiative to work and to think, to save and to scrape in order to improve their homes and farms. It is for this reason that it is usually easier to establish domestic reforms which the women understand and appreciate (such as the paving of streets or the improvement of wells), even though they cost more money and bring in no cash return, than to spread the use of good ploughs or to persuade the people to buy good bulls.

Our population is increasing at such a rate that many people are seriously beginning to wonder if, after all, it would not be better to release again the forces of disease and famine in order to keep the population in check.* As noted elsewhere, however, there is a definite connexion between the birth-rate and the standard of living. As the standard of living depends mainly on the women what better reason than this could we have for devoting all our strength and resources to making up for the past neglect of women's education and welfare?

Every year scores of young men are trained for rural work of various kinds, and as one watches them at work before they leave their training institution one is struck by their smartness and their splendid promise. They are full of zeal and knowledge, and determined to put things right wherever they find them wrong. A few years later, one comes across them again at work and one is unable to recognise them for the same people. They have stepped

* See pp. 18, 21. India suffers more from under-development than from over-population. Too little money, labour and brains have been put into the soil of India. Its produce could be multiplied by three or four if even the simple instructions in this book were fully carried out!

back into the old ways and are content to pass their time in a dull routine imitation of what they learnt at their training school. I feel certain that one great cause of this disastrous change is that no man can live permanently ahead of his home. Whatever he has learnt or whatever progress he has made, he must in the end come back to the standard of his home, and the standard of his home is that of his wife. No soldier can fight in front and behind him at the same time, and the trained worker cannot hope to uplift his home as well as his neighbourhood to the standards he has so recently acquired. Unless he can gather inspiration from his home for his daily struggle, sooner or later he is bound to slip back to the old level. It is essential, therefore, that opportunities should be made for workers to obtain training for their womenfolk so that, when they go forth on their crusade, their own homes may be shining examples of the new life they are trying to teach and they may merely be spreading the atmosphere of their own homes and not trying to teach exotic doctrines of which they have no personal experience.

In all living species the welfare of her young and her home is an instinct of the female, and the human species is no exception. With the male it is less an instinct than an acquired virtue. All money, therefore, spent on women's work will bring in a far quicker and greater return than money spent on men's work, as obviously the exploitation of a natural instinct is a far easier business than the inculcation of a difficult virtue.*

The progress of a country is the progress of its women, and the foundations of rural reconstruction are girls' education, Women's Institutes and women's welfare work of all kinds.† This much can be stated without fear of argument or contradiction. When, however, we come to the details of the actual work to be done, we are at once in difficulties. Books can be written about the

All war memorials after this war must take the shape of practical schemes for the welfare of women.

† See p. 294 (7).

men's side of rural reconstruction, but so little has been done for the women that there is very little to say.

II. EDUCATION OF GIRLS

The Hartog Report said that in every scheme of extension priority should be given to girls' education, and let us now hope that the unique and costly experiment of trying to uplift and civilize a nation without educating the women is at last to be abandoned.*

Whatever higher education is given to the select few, the rank and file in village and town alike want, in addition to their reading, writing and arithmetic, some physical training, general culture and a strong element of domestic work. Domestic training should include cooking and food values, making and mending clothes, housework of all kinds, house accounts, domestic hygiene, the simple facts of the common diseases and epidemics and the means of avoiding them—what harm is done by rats, fleas, flies, mosquitoes, etc.—the use of a few simple medicines, infant training and welfare, and children's games.

Few people in the Punjab seem to be aware of the special needs of children with regard to food, sleep, recreation, etc. This is not because the parents have no affection for their children, but because it has not occurred to them that special consideration in these matters is something children have a right to expect. The mother is the only person competent to think these questions out. The matter will, therefore, not receive proper attention until the women are educated.

There is a rather general complaint that the higher education now given to girls spoils them for the drudgery of home life, and they refuse to help in the house when they return from school or college.† Instead of studying the domestic arts and sciences, the girls, in their struggle for 'equality' with the men, prefer to learn

* See pp. 105, 290 (7), 294 (7).

† The danger is inherent in all education. How is education to be given without losing the old-fashioned virtues so staunchly maintained among primitive folk?

what their brothers learn and neglect to make themselves expert in their own peculiar subjects. In this way the lucky girls who get a higher education, instead of being pioneers of women's welfare work and spreading the demands for girls' education by proving that the educated girl is a better wife and home-maker, utilize their education to escape from their responsibilities and do not even bring up their own children. It is even alleged that they are backed up in this by their mothers who encourage them to escape the drudgery which fell to their own lot.

The educated young man is also blamed for insisting that his wife should be a B.A. rather than an expert in running a home. If all this is true, the remedy is obvious: that the educational authorities should make it impossible for any girl to emerge successfully from high school or college without a thorough grounding in what is bound in most cases to be her life-work. 'Home Science', instead of as now being rather looked down upon and in some ways a handicap for further scholastic studies, should be a popular and valuable subject for every examination and every stage of education, for the middle school examination, for the matriculation, for the F.A., B.A., B.T. and M.A. A good diploma course, lasting at least nine months, is wanted after the matriculation examination for those who do not proceed to the university. Home Science must bring as much credit and honour to the girl student as any other course and the young men must be taught to appreciate and to demand a good standard of housekeeping! As far as possible, domestic work should be taught as a routine of daily life rather than as a scientific subject.

There is yet another possible source of opposition to higher education for girls. It is feared that it will mean more competition still for the few available jobs for the men. Will it? Considering that in the Punjab at any rate there are definitely fewer women than men and that, say what people will, the average girl prefers and probably will always prefer running a home to working in

an office, and considering that the women of the Punjab have hardly yet begun to go into the exclusively female professions such as nursing and the teaching of small children, it should not be difficult to get them in their own best interests not to jeopardize the future of girls' higher education by jostling with their brothers for men's work while their own professions are still understaffed.

The medical inspection and after-care of schoolgirls is even more necessary than that of schoolboys. It is a common scandal that the buildings of girls' schools, particularly in towns, are dark and damp, small and overcrowded, without arrangements for water, sanitation or games, and with miserably inadequate equipment. The parents can easily put this right and in their own interests they should do so.

The education of village girls is a great problem. No country in the world can afford two schools in each village, to say nothing of the difficulties of inspection and staff, and yet the villagers are loath to send the little girls to school with their brothers. Village parents would send their girls quickly enough to a mixed school if the teachers were female, but where are they to be got? The villager does not welcome teachers from the towns—their customs, habits, culture, language are all different—while there are few village girls coming up for training as teachers. And there is no 'custom' yet for women to teach boys in an open school. Finally it is not easy for a solitary female teacher from outside to lodge in a village. These are but some of the difficulties!

Difficulties, however, were made to be overcome, and if this problem is attacked from all sides at once, it will soon be solved. Where parents are ready to send their little girls to school with their little brothers they must be encouraged to do so. The parents are the best judges of these things, and wherever and to whatever age they allow it, there must be no obstacles from the official side. Teachers in whose schools girls are found are obviously better than those who do not inspire such confidence in the parents, and they must be rewarded accordingly. Wherever

mixed schools with entirely female teaching staff are possible, they must be encouraged. The boys in these schools are turned out after the primary classes and the girls continue for the middle classes. Male teachers must be encouraged to enlist their female relations as assistant teachers in their own schools. Whatever their qualifications, these assistants can at least come in for an hour or two a day and look to the welfare of the little girls, possibly teach simple sewing or knitting or some other domestic work, organize games for them, and inspire the parents with confidence to send their girls with their boys to the village school.*

Short training courses† must be organized in the districts for teachers' wives so that they may acquire whatever knowledge they can to enable them to be useful in their village schools.

Men's Normal Schools must have separate sections where students' wives can get domestic training.

Normal Schools for female teachers‡ must be established in rural surroundings, and there must be domestic courses for the teachers of rural girls' schools.

The Girl Guide movement is as valuable for girls as the Scout movement is for boys. It is beginning to spread to the villages and adds a wonderful opportunity for happiness, health and service to the dull routine of our starved and neglected girls' schools. Here, however, as in all other welfare work for village women, the principal obstacles are the absence of money and of an organised welfare service to support and encourage the workers in the innumerable difficulties of village work and touring.§

III. TRAINED WORKERS AND HOME-MAKING INSTITUTES

So much for the young. The grown-ups must also be attended to. Trained women of all kinds are very rare, they are very hard to locate in villages, their touring is extremely difficult. They marry

* See p. 300 (4).

† These were run for some years in Gurgaon and have now been restarted in several places in the Punjab.

‡ These are also being started in the Punjab.

§ See pp. 133-5.

and are lost to us or they require long periods of leave for domestic purposes. For one good reason or another they cost far more, for the work they do, than male employees. Their supervision and the co-ordination of the workers of various departments is another problem. Their supervisors and co-ordinators are often men, sometimes honorary lady social workers or committees, rarely stipendiary women workers. Women should, of course, be supervised by women, but when this is impossible, the most senior possible male official should be put in charge. Men expected to supervise or to organize women's work are advised to fortify themselves with a committee of local ladies to advise and assist them.

In view of the extreme difficulty of getting rural female workers, it is suggested that the best line of advance is by means of the married worker. The best way of improving village life is to have living examples of better homes in as many villages as possible. Every villager or rural worker, therefore, whose wife has been properly trained, is a light shining in the darkness, a centre of culture and knowledge.

The first thing, therefore, is home-making institutes* where women can learn, as a daily routine rather than as a science, all that we want the village housewife to know of hygiene, diet, cooking, making and mending clothes, household accounts, child training and psychology and everything else that goes to the running of a good home. To these homes must be encouraged to go the wives and daughters of our rural leaders and all who are, or are going to be, the wives of rural workers. If preference in all rural appointments—perhaps even enhanced pay—were given to those whose wives had been trained in social work, we might soon have a large number of village homes of the new type for the people to see and copy.

* Already opened by Mrs Sam Higginbottom at the Agricultural Institute, Allahabad. A Domestic Training School has been running for some years now in the Punjab. At first it trained women to be posted as paid workers in villages. Now it is training voluntary workers, wives of rural leaders and members of co-operative societies, etc,

Until a sufficient number of satisfactory stipendiary female workers are available, why not give honoraria to these trained wives of male workers for work actually done? If a co-operative employee's wife organizes women's co-operative societies, if a doctor's wife helps in her husband's dispensary or organizes a women's institute, if a schoolmaster's or a patwari's wife or the wife of any other rural worker helps in any way, let her receive a reward in proportion to the work done. Whatever work was done would be paid for and there would be no question of touring, maternity leave or any other difficulty. This is not an ideal arrangement but it would be cheaper and more satisfactory, or at least less unsatisfactory, than much of the work now done, and the home-making institutes would at any rate do much to spread light and culture in the villages.

IV. WOMEN'S INSTITUTES

Some kind of Women's Institute or Association is required in every village.

A full-blown Women's Institute is an elaborate thing, but its essence is simple. It has:

(i) *Paying membership.* The payment may be very small, but the element of payment must be introduced into our village women's societies at the very earliest moment, as the paying of money is a great tonic; it creates independence and self-respect and increases enthusiasm: where people's money is, there is their heart!*

(ii) *Office-bearers.* Bring these in early too; they add dignity and consequence to the proceedings.

(iii) *A triple programme.*

(a) Social: the members organizing little parties.

(b) Recreational: folk-dancing, indoor or outdoor games, glee-singing, playlets, etc. Something of this kind would be very popular in our villages.

(c) Cultural: talks about some subject of general or of

* See p. 15.

domestic interest, a new way of cooking some simple dish, or a better way of making a baby's vest.

We shall not get all this in our villages for a long time—perhaps never—but any sort of organization, however simple, will be of immense value. If only the women can be collected at intervals and given a little instruction and their interest aroused in the possibilities of improvement, all our work will be far easier than it is now. The trouble is to find trained workers capable of making a start, and we must begin with what we can find.

Every female teacher, health visitor, nurse, lady doctor, and the wife of every schoolteacher and other rural worker must be encouraged—and paid something for her trouble if she so desires—to make herself a centre of light and culture in her village. If she will only collect a few village women once a week or once a fortnight and teach them whatever she can of sewing, knitting, child welfare, or read aloud something useful and interesting, a beginning will have been made which in time can be developed into a centre from which knowledge can be radiated into the village homes. The women are eager enough to learn; the only problem is to find teachers. There is plenty of stuff to read aloud and discuss—a chapter of *Socrates in an Indian Village*,* a page of the district newspaper, or some of the many printed leaflets issued—and once this begins, more and better stuff will soon be written.

Let all those ladies who have the advantage of education, culture, wealth or leisure join in and help. They can help by visiting the struggling village worker to encourage and advise her, and by themselves joining in the weekly meeting when they happen to be within reach. They can visit girls' schools, cheer up the lonely teacher, and brighten the day for the little girls. They can help by forming themselves into a district committee to organize and encourage women's village societies, to provide literature, flower-seeds,† pictures, material and money for them,

See also *Socrates Persists in India* and *Socrates at School*, † See p. 45.

to advise Government and local bodies in all matters of female and infant welfare work and to help in organizing it. Women's work can only be done by women and only women can say what ought to be done.

Co-operation can help very much here. If village men require co-operative organization, much more so do village women, to provide for their wants, to bring them knowledge and skilled assistance, and to enable them to voice their needs. There is no reason why the Women's Institute or Association should not be a registered co-operative society—and there is every reason why it should be, as this will mean permanence, and skilled and sympathetic assistance and supervision. The female co-operative staff should, of course, be trained* in the simple elements of hygiene, welfare work and home crafts so that whatever kind of female society is formed, they may be able to help housewives and mothers in every way possible.

The panchayat,† or whatever other organization there is in the village, should be interested in women's welfare work. With their authority and influence they should be able to compel the dais to go for training and if necessary to find the small sums of money required for the purpose. They should be able to stop untrained dais from practising and to insist on the trained dais maintaining the new standards and not lapsing into their old dirty ways. The village panchayat should be of great use in helping to get village girls trained as teachers and in finding homes for, and making life possible for, outside girls who come to teach. In fact the panchayat should insist on welfare work being done, and should find ways and means for it, and make things easy for any welfare workers who visit or reside in the village.

In all programmes of rural work special attention should be paid to home amenities—chimneys, hayboxes, street paving, etc.—so that the women's attention may be attracted. If we can convince them that we want, and are able, to help in making

things easier and better for the home-keeper, they will be more likely to help in those parts of the programme which are less obviously and immediately beneficial.

V. A WELFARE SERVICE

The men have complete services for their needs, whole-time salaried officials in every district and division, and at provincial headquarters, to co-ordinate and control their activities.

Throughout the province there are a few lady doctors—practically none in the villages—and with only one lady doctor for the whole province to supervise and help them. There are a few health visitors—with a touring supervisor—a skeleton education service and a still more meagre women's co-operative staff. And no one to co-ordinate, to encourage and support them except here and there the public-spirited wife of an official!

Can it for a moment be supposed that the women are in less need of help or that the traditional methods of running a home and bringing up children are not capable of just as much improvement as the traditional methods of farming or of animal husbandry?

Instinct is not a complete guide for the bringing up of children in a civilized environment, particularly when civilization often includes overcrowding, insanitation, and malnutrition.

The difficulties of the village housekeeper are greatly increased by her menfolk's failure to keep the village clean, to produce crops which will enable her to give her family a balanced diet, and to devote their whole time and attention to the improvement of the village. Is this any reason for helping the men to mend their ways and giving no thought to the troubles and sufferings of the women?

The women's side of rural reconstruction is even more important than the men's and the time is past when this vital work can be left solely to the philanthropic efforts of part-time volunteers. District Officers' wives do what they can, but not every officer has a wife and not every wife has the leisure, training

to advise Government and local bodies in all matters of female and infant welfare work and to help in organizing it. Women's work can only be done by women and only women can say what ought to be done.

Co-operation can help very much here. If village men require co-operative organization, much more so do village women, to provide for their wants, to bring them knowledge and skilled assistance, and to enable them to voice their needs. There is no reason why the Women's Institute or Association should not be a registered co-operative society—and there is every reason why it should be, as this will mean permanence, and skilled and sympathetic assistance and supervision. The female co-operative staff should, of course, be trained* in the simple elements of hygiene, welfare work and home crafts so that whatever kind of female society is formed, they may be able to help housewives and mothers in every way possible.

The panchayat,† or whatever other organization there is in the village, should be interested in women's welfare work. With their authority and influence they should be able to compel the dais to go for training and if necessary to find the small sums of money required for the purpose. They should be able to stop untrained dais from practising and to insist on the trained dais maintaining the new standards and not lapsing into their old dirty ways. The village panchayat should be of great use in helping to get village girls trained as teachers and in finding homes for, and making life possible for, outside girls who come to teach. In fact the panchayat should insist on welfare work being done, and should find ways and means for it, and make things easy for any welfare workers who visit or reside in the village.

In all programmes of rural work special attention should be paid to home amenities—chimneys, hayboxes, street paving, etc.—so that the women's attention may be attracted. If we can convince them that we want, and are able, to help in making

* This is being done in the Punjab.

† See p. 146.

things easier and better for the home-keeper, they will be more likely to help in those parts of the programme which are less obviously and immediately beneficial.

V. A WELFARE SERVICE

The men have complete services for their needs, whole-time salaried officials in every district and division, and at provincial headquarters, to co-ordinate and control their activities.

Throughout the province there are a few lady doctors—practically none in the villages—and with only one lady doctor for the whole province to supervise and help them. There are a few health visitors—with a touring supervisor—a skeleton education service and a still more meagre women's co-operative staff. And no one to co-ordinate, to encourage and support them except here and there the public-spirited wife of an official!

Can it for a moment be supposed that the women are in less need of help or that the traditional methods of running a home and bringing up children are not capable of just as much improvement as the traditional methods of farming or of animal husbandry?

Instinct is not a complete guide for the bringing up of children in a civilized environment, particularly when civilization often includes overcrowding, insanitation, and malnutrition.

The difficulties of the village housekeeper are greatly increased by her menfolk's failure to keep the village clean, to produce crops which will enable her to give her family a balanced diet, and to devote their whole time and attention to the improvement of the village. Is this any reason for helping the men to mend their ways and giving no thought to the troubles and sufferings of the women?

The women's side of rural reconstruction is even more important than the men's and the time is past when this vital work can be left solely to the philanthropic efforts of part-time volunteers. District Officers' wives do what they can, but not every officer has a wife and not every wife has the leisure, training

or inclination to do steady continuous welfare work. Nor indeed is it fair to ask them to. The philanthropic volunteer's proper work is not to do the day-to-day work of a welfare service. Her job is to back up the trained worker and to give whatever help her other duties allow her to.

So haphazard is the organization of social work that even the volunteer cannot be made proper use of as there is no organization into which she can be fitted and any one who wishes to help has to work on her own instead of being able to enlist herself in an organized team, where she can learn the work, and make full use of whatever time she can spare for helping her fellow women.*

Social work is a whole-time task demanding trained workers capable of working year in and year out in the same place. Salaried workers are therefore essential and once they are established, it will be possible to enlist, and to train and to make the fullest use of voluntary workers. One often hears complaints at the absence of a spirit of social service. Once there is a nucleus of trained whole-time workers and an organization, if then voluntary effort is not forthcoming it will be time to complain. Till then voluntary effort is almost helpless.

Nor can this work be left to existing departmental staff. They are already far too few for their ever increasing duties, and their difficulties are infinite. No, this is new work and requires a new service. Until recently the men's work was in water-tight compartments. What women's work there is, is still so, and must remain so until a co-ordinating agency is created so that every institution and every worker can join together in the great task of teaching the art of home-making which is the whole end of rural reconstruction.

The first essential therefore for progress in women's welfare work is the immediate appointment of trained and qualified whole-time salaried female social workers.

* Can the women's organizations built up to help India's war effort be turned over after the war to promote the welfare of women of India, in town and country alike?

Their duties would be:

(i) to survey the province and study the work already going on so that they may advise Government and districts alike upon future plans,

(ii) to co-ordinate existing work and workers,

(iii) to encourage and to organize voluntary effort,

(iv) and to assist wherever possible in establishing women's village societies, and

(v) to organize district committees, and in time a provincial committee, both to develop and expand the work and to enable Government and public at last to hear what the women themselves think about the problems of their own welfare.

It is suggested that a beginning should be made with one or two workers. They would awaken the public, men and women alike, to the importance of this subject and their work would lead immediately to the appointment of whole-time workers wherever work had reached the stage when voluntary effort could not keep pace with it, until the province had a complete welfare service.

VI. HEALTH AND MEDICAL WORK

The three important things are:

(i) Medical aid

(ii) Training and supervising dais

(iii) Spreading knowledge of simple hygiene and infant welfare, and bringing practical help to village mothers and housewives.

The second and third are at present done by health visitors, in the few places where these exist, but as women's associations start, and the wives of landlords and other rural leaders and officials begin to tackle their social duties as they should, much of the third will be done by them.

1. Difficulties. The first difficulty is the absence of sufficient money to bring medical skill within the reach of every village home. It is not yet realized that, whereas a healthy male can

go the whole of his life without any other skilled attention than that of the vaccinator and an occasional inoculation, the healthiest female in the world during her child-bearing age urgently requires skilled attention, and if she does not get it she may die or be crippled for life.

And yet in this matter, as in education and everything else, the men got there first and laid hands upon all the money, and it is now a difficult job to find money for the even more urgent work of finding doctors and health workers for the women. In the end it will probably be found necessary—by statute or however else such a thing can be done—to lay it down definitely and positively that, whatever the needs of the men, a certain annually increasing percentage of all the funds of Government and local bodies set aside for education, health, medicine and general welfare shall be devoted to the needs of the women. Public opinion is, however, not yet quite ready for such a move, although it probably soon will be, sooner perhaps than we are apt to think.

Once the women, through their village societies and district committees, begin to be more articulate, more money will be found for their special needs, but 'what the eye doesn't see the heart doesn't grieve over', and few people realize the appalling suffering silently endured by the village mother. A law has been passed to bring a trained practitioner within the reach of every mother in England. There are a million babies born every year in the Punjab. How many of them or of their mothers receive any skilled attention? Statistics say that in India one woman in ten dies in childbirth. No wonder!

The result of this failure to provide the women with a fair share of the available funds is that much official and non-official effort has to be devoted to trying to squeeze and scrape money from here, there and everywhere, and to trying to work without money.

This effort is all to the good as far too few people yet realize and shoulder their duties to society; but how much better would it

be if these efforts could be devoted to the work itself instead of to finding the wherewithal to do any work at all.

The second big difficulty is to plant in a village—with no society or other amenities—a young unattached female, often of a different class, upbringing, traditions and religion to anyone else in the village.

The ideal arrangement is that our female rural worker, whether medical or otherwise, should be the wife of someone actually resident or employed in a village. If her husband is a doctor, veterinary surgeon, dispenser, schoolmaster, or agricultural expert, then regardless of red tape and the 'general post' of periodical transfers, let them go to a village and be given sufficient inducement to stay there. Time will doubtless put all this right, particularly when there are well-established village councils and women's organizations to look after such matters, but this is no reason for not doing all in our power now to get female workers into the villages.*

2. Doctors. There are practically no female doctors in villages and no money to provide them.† Even the central and tahsil hospitals have not all yet got female doctors, and this defect should be immediately rectified at whatever sacrifice necessary of medical services for males.

If it is not possible to have a female doctor in addition to the male doctor at our rural dispensaries, then it is high time that some of the male doctors were replaced by female doctors, and certainly no new rural dispensary should now be opened except with a female doctor in charge. Meanwhile some kind of female attendant must be attached to our rural dispensaries, whether as compounder, nurse-compounder, nurse-dai, nurse, or dai, to assist the female patients in describing their symptoms and in general to inspire confidence and to give what help they can.

Country doctors in England often do much of their own dispen-

* See p. 114.

† In Turkey free training is provided for women in return for so many years' rural service.

sing. Could not money be saved in this way in the Punjab and spent on providing a female attendant? It is said that the presence of a male compounder is necessary to deputize for the doctor when he is away, often for the purpose of giving evidence in medico-legal cases: but need rural doctors touch medico-legal work? In any case the presence of an unqualified male deputy, while the doctor is away, is infinitely less valuable than the daily services of an attendant for the female half of the population.

3. Health visitors and midwives. The training of dais is as important as the training of patwaris and should be done as thoroughly and as systematically. At present it is left largely to semi-official and unofficial effort and philanthropy, which does what it can, but will not cover the whole area in any period we can foresee.

Dai-training presents difficulties. Doctors have a tradition of demanding fees and are therefore difficult to use for training dais and supervising maternity work in scattered villages. Health visitors can do this excellently, and their traditions are of helpful service, unhindered by the question of fees. But they cost nearly as much as doctors and, although they can give a lot of help and can prevent a lot of disease and suffering, they are not qualified to tackle serious cases (whether maternity or other) demanding positive treatment. Moreover their best work is done in a small area where, by continuous residence and personal influence and sympathy, they build up an atmosphere of friendliness and confidence. At present they have to be posted in a rural centre for just long enough to train the local dais, and then they are moved on to another centre, leaving the dais to their own devices, without much in the way of effective supervision, and losing the value of all the personal contacts they have established by their months of house-to-house visiting. Meanwhile, until the trained dais are sufficiently numerous to combine and boycott the untrained, the two practise side by side, and as the usual fee is a rupee for a boy and eight annas for a girl (is it the poor dai's

fault that girls are born?) the only inducement to undergo training is the few annas given for each lecture attended.*

Yet another difficulty in dai-training is the fact that few maternity cases come to hospital at all or are even reported to the doctors, so that adequate maternity attendance can be had only in the people's homes, and by pupils of the old-fashioned dais.

It is common for families to be served by family dais generation after generation, so that even when there is a trained dai available, it is very difficult to break the age-old family connexion and call her in. All this will solve itself when there are district ladies' committees, village women's societies and village administrative panchayats and committees. It will then be possible and easy to create a public opinion in favour of using trained dais in preference to untrained, and of paying them properly for their services. Family dais will soon come into line and get trained when they find that skill and not custom is the way to employment.

Something is urgently required—refresher courses are valuable but not an adequate substitute—by way of following up and supervising and helping the trained dais in their work after the health visitor has moved on to her next rural centre. It is also most necessary that there should be a female doctor available—in course of time, male doctors will, we hope, be acceptable but that time has not yet arrived—to deal with abnormal and difficult cases reported by the dais. At present the dais are bound to tackle these cases themselves and though they undoubtedly do much good work this is far from being an ideal arrangement.

As for female doctors and health visitors, I doubt if the last word has been said. Could we not have something that combines the advantages of both and avoids the difficulties? For the homely touch and simple preventive work—house-to-house

* The licence fee however for a trained dai on registration is as much as Rs. 3; and untrained dais cannot be compelled to give up practising.

visiting, teaching cleanliness and so on*—a less highly qualified, and far less expensive worker would suffice, while for the technical work both of doctor and health visitor, some kind of worker, who has the medical training but is without any tradition of fees,† is required.

It is not right that the maternity service of rural women should be held up permanently on the fee question.‡ But this, like all the other problems,§ will only be solved when women's work is organized by women, and money is found for the purpose, and when educated women—the wives and daughters of land-owners and others living or employed in rural areas—begin to interest themselves in social work in the way their sisters are doing in other countries.

4. Conclusion. As I pointed out before, so little has yet been done in the sphere of women's welfare work that it is impossible to say exactly what shape its organization should take, but every way of developing and expanding the work must be tried out till experience teaches us the best machinery and methods. The first essential, however, is MONEY, and the second, WHOLE-TIME QUALIFIED FEMALE WORKERS, and ORGANIZATION.

Women's work more than any other requires organization and co-ordination. There are infinite difficulties in the way of both resident and touring female workers, and they can only work with freedom and confidence if they receive support and encouragement, and are well looked after and supervised and co-ordinated by workers of their own sex. Departmentalism and water-

* Much of this work will in time be done by the wives and daughters of the rural gentry, leaders, and workers—as is done in other countries.

† See pp. 15, 116-17.

‡ A further complication of the fee question is the unfortunate fact that although villagers will die rather than pay eight annas for a home visit from the doctor, the moment the doctor was bound to visit them without a fee, there would at once be complaints if he did not spend half his time in their homes! Such is human nature.

§ A very urgent social reform is the universal registration of marriage. Marriage is the most important contract in the world and yet it need not be recorded or registered! This is a cruel injustice to the women.

tight compartments are utterly fatal to women's work, and it is impossible for district workers to depend solely on chiefs resident at provincial headquarters. Every district must have its local organization and supervision, to which every female worker of every department and agency may look for support, guidance and, if necessary, correction.

CHAPTER XI

VILLAGE ORGANIZATION

1. The problem. There are a hundred and one things to be done to make the village a happy, healthy, comfortable place to live in, and every one must do his or her best; but almost all the important things have got to be done by people working together rather than by people working singly, each on his or her own account. The big things to be done are everybody's job, and that means nobody's job until there is someone to tell everybody what to do and how and when to do it and to see that they do actually do it. In a village owned by a single man it is easy for the landlord or his agent to organize this. But elsewhere how is it to be done? Most people are willing to work if other people will work too, but few people like to do the common work of the village unless their neighbours join in and do their share, and still fewer people like to keep on doing the dull but necessary chores of a properly organized community existence. How are the roads to be widened and raised and drained and mended, and then kept in good order? Who is to repair the drinking wells and keep them repaired? How are the streets to be kept clean and how are they to be paved and drained? Who is to keep the people up to the mark when they forget to kill their rats, or to keep their premises clean, or to put up ventilators? When someone's wall is dangerous to passers-by, or a tree falls across the road, who is to see about it? One person's carelessness may destroy the comfort, or risk the health

of the whole village, and yet there is no one to attend to it. Where are initiative and continuity to come from?

The improvement of grazing grounds, the prevention of the denudation of hillsides,* and the growing of grass, timber and firewood on all waste places, village common lands and roadsides will bring immense benefit to the village, but this work can only be done by some well-established administrative authority in the village.

The village is a terribly dull spot. Even a riot or a dog-fight is a welcome diversion, and once a boy gets a glimpse of the interesting world outside from his books at school, he wants to run away to the town and to leave his village for ever. The villager is apathetic and his mind inactive, because he never gets anything new to think or talk about. This is all wrong. Every villager should play games occasionally and should hear the news and keep in touch with the outside world. He also needs a bit of entertainment in the evenings just to keep his mind and body fresh and prevent his brain from atrophying. But there is no one to see about these things, no one to collect the money for a newspaper, a reading room or a wireless set, and no one to organize a games club.

Every good villager, if he knew about it and knew how to, would gladly support the Red Cross and the Boy Scouts and would like to help a nursing and medical association or subscribe for a weekly visit by a doctor, so that he might get attention for himself, and particularly for his wife and children, when need arises. But there is no one to organize all this.

Finally the village is inarticulate. It cannot express its opinion or say what it wants, or what it thinks should be done.

And then what about the many little causes of irritation and quarrelling that must arise in our crowded villages? Who is to settle them before they become big feuds in which the whole village takes sides and wastes all its energies and resources in faction and litigation?—

See chap. vii, and pp. 51, 146, 161-2.

Everybody looks at his neighbour and says, 'If you will do your share I will do mine.' And nothing is done! What is the remedy?

2. The solution. The solution is organization. If we want to improve the village and to make life worth living there, we must organize the villagers to think, plan, work and pay for their own necessities and amenities.

There can be no permanent or spontaneous improvement in village life until there is some organization working inside the village itself to keep the villagers up to the mark, and to get all the many things done that must be done to make the village worth living in.

Touring Government officials can and do come in and organize a great clean-up every now and then, but they cannot keep every village clean from day to day and week to week. Government can advise, inspire and teach, but the actual daily work must be done by the villagers themselves.* No outsider can organize them so that everybody does his proper share—working or paying—and no one can say exactly what must be done, and how and when it should be done, except a body of people resident in the village itself, selected by the villagers themselves from among themselves, and inspiring confidence by their fairness, commonsense, and keenness.

There is no country in the world, in which civilization has spread into the village, where the village has not a local resident organization to administer it, and there is no reason to suppose either that the Punjab village can be put right in any other way or that the Punjab village is incapable of being organized in this way. This administrative body can be called a Parish Council, a panchayat or a co-operative society, but its main principles and its functions, are much the same. It belongs to the villagers who join it or elect it, and it raises money, organizes and directs the service of the villagers for the improvement of home and village life.

* See pp. 14, 15.

3. Compulsion or self-government. There is no Public Health Act in the Punjab and it is generally believed that no law exists by which people can be compelled to be sanitary and to adopt such habits as will ensure clean, healthy homes and villages, to take such action as will prevent the spread of pests and diseases among crops, cattle or human beings, and generally to behave as good citizens. This is incorrect as the Municipal, the District Boards and the Panchayat Acts, if only they were made full use of, contain a framework ample for the purpose of developing and enforcing good citizenship. The trouble is that there is no public opinion behind them and without a strong public opinion to condemn anti-social actions and the neglect of duties of good citizenship, no amount of laws will make either town or country fit to live in.

Village Uplift is at present being done by official persuasion and the vigour with which this is applied makes the pressure vary from mere pious advice almost to actual compulsion. The defects of this method are many.

(i) It is impermanent.

(ii) It is inefficient and confines the work to the most elementary beginnings. Instead of being able to go on to new things and to continue the general advance to a better village life, the persuaders have to exhaust their efforts in trying to cajole the small but obstinate minority which always lags behind the rest of the community.

(iii) It spares the lazy, the obstructive and the bad citizen, who is holding back the village, and is the very person whom it is most important to tackle.

(iv) It is unfair to the workers as they are expected to achieve results quite beyond the warrant of their legal authority.

It is often suggested, particularly by the village officers and leaders who are expected to carry out the rural programme under the present system, that legalized executive authority should be invoked for the simplest, most important and best understood items. Most villagers are ready to do the right thing if their

neighbours will also do it and most villagers are ready to do as they are told. At first, at any rate, this might lead to immediate and marked improvement in our villages and would be very welcome to many harassed officials now expected to make bricks without straw.

There are two objections to this policy: (i) it would not lead to the development of self-governing institutions which Government desires to see spreading in the villages; (ii) it would require an army of officials to see to the carrying out of the new laws, as a law that is not obeyed is worse than no law at all.

But do we want official interference in every home? I doubt if the Punjabi would really like to be regimented in all the details of his daily life, in home, field and village, by a horde of petty officials. He is often bitter enough about the few there are now! The time for laws and compulsion will come when ninety per cent of the people are living and farming in a reasonable common-sense manner but are frustrated by a ten per cent minority of stupid, idle or obstinate people whose resistance to better ways endangers the health and prosperity of the general mass of the people.

The alternative to both persuasion and dictatorship is that the people themselves should be organized to administer their local areas and make them fit to live in. The process will be slow, and there will be nothing spectacular about it, but any progress achieved and any civic sense developed by this method will at least be permanent.

VILLAGE ORGANIZATIONS

The following are the forms of village organizations so far devised in the Punjab. There is room for them all, and one or other or all of them is absolutely essential for the development of the Rural Reconstruction movement. They should all be tried, and whichever succeeds and proves itself the best suited to the circumstances of each village should be continued and developed.

It is often said that panchayats are impossible owing to the factions and parties in the village. It is the very absence of a local resident authority to settle disputes and nip feuds in the bud that has caused all these factions to arise and spread. In the old days, when the lambardars were real headmen and there was some authority in the village that every one acknowledged, there was less talk of factions and feuds. We have now got to re-establish order, peace and authority in the village by means of the panchayat.

If necessary the Panchayat Act must be altered until it suits village conditions, but if ever we want to see a happy countryside, at all costs and with whatever trials and experiments that may be necessary, Village Councils must be established. And they must not be left to the tender mercies of overworked officials in their spare time nor must they be left to look after themselves but they must be properly supervised by a very carefully selected and thoroughly trained staff appointed for this purpose and this purpose only.

2. The co-operative society. The second kind of council is the co-operative society. This is also governed by law, the Co-operative Societies Act. Co-operative societies can be organized to provide every kind of service and to meet every need. They are dealt with in Chapter XII. They have a paying membership and are a close society. Until every villager joins it, therefore, the society cannot speak or act for the whole village or organize services for the whole village.

Moreover, although these co-operative societies have a law which sees to their proper organization, regular audit, and necessary inspection and supervision, they have no law like the Panchayat Act to enable them to administer a village. If all the villagers were members, their committee could perhaps be gazetted as a panchayat, but in actual practice their functions are rather different, and each society is organized to do one particular work, such as credit, or cattle improvement. At the same time the presence of a respected and representative body of men like

the committee of a good co-operative society is invaluable in any village, and until a good panchayat can be developed the co-operative society will unofficially do much of the work of a panchayat in organizing village services and in settling disputes.*

A possible combination of the two would perhaps be to continue the committee of a Co-operative Consolidation of Holdings Society as the nucleus of a statutory panchayat for its village, after the conclusion of its consolidation work, so that the cohesive spirit and the experience gained in the difficult task of re-dividing all the land might be preserved for the day-to-day administration of the village.

3. Sanitary committees. These are set up by District Boards under special by-laws, and supervised by the District Medical Officer of Health and his staff. The by-laws are still the subject of discussion, as the best method of working has not yet been evolved. It is likely that if good panchayats can be organized these sanitary committees will disappear, as the panchayat, if only it will work properly, is obviously the best possible form of village organization.

4. Other bodies. Apart from these three kinds of bodies, with laws to support them, various societies, committees, and associations are organized from time to time in many villages to carry out various duties and to provide various services. They have no law behind them, and are apt to prosper and to fade away as officers come and go or enthusiasm waxes and wanes among individual rural leaders. Anyway, they serve a good purpose while they last and, like the others, help to teach the villagers both the necessity for, and the principles and practice of, self-government, and they help to pave the way for the regular bodies described above.

The danger of these informal societies is that the very informality which is the reason for their existence is apt to be the

* Particularly of course the Co-operative Arbitration Society. A Better Living Co-operative Society might perhaps administer a village if its membership included all classes.

cause of their ineffectiveness. People who are unwilling to make the small sacrifice and to undergo the small self-discipline necessary for the formation of a co-operative society are unlikely to welcome the hardship and self-denial involved in climbing the steep hill of progress.

Instances of these associations are the health committees of the Public Health Department, education committees, games clubs, and parents' associations started by the Department of Public Instruction, and the farmers' associations established by the Agricultural Department. These last start with a few keen farmers who agree to sow certain improved crops or to try out certain improved methods and implements or to devote some of their land to a demonstration farm to be worked according to the instructions of the departmental expert who visits them from time to time. A book or file is kept by the association, where visitors record the progress and results of the work. As the association gains strength it undertakes more and more of the various branches of rural reconstruction.

These associations should be, and sometimes are, combined in Tahsil Federations meeting regularly to discuss their common difficulties and problems, to compare results and to receive information and advice. Fees for membership of the village societies and affiliation fees for the federations are not usually charged. A paying membership, however, means *pakka* members and a little money for correspondence, for issuing notices or for sending short notes to the members about new and useful things, and for collecting a few books, journals and other necessities of modern progressive activity. People take much more pride in things they have paid for than in what they get free.* The paying of fees and subscriptions, however small, is a most wholesome training, and it is difficult to see how without some little discipline of this sort a genuine and permanent association can be built up.

Other organizations such as⁹ Women's Institutes, Scouts and so on, are dealt with in other chapters.

THE VILLAGE BOOK OF PROGRESS

In all villages where intensive work is going on there should be a note-book or file kept, where each visitor can record what he sees being done and what the villagers agree to do next. This will form a permanent progress report, it will keep the villagers up to the mark and give touring officers a definite line to work upon. When an officer visits the village, instead of just having to confine himself to general talk, he will see from the file that A and B promised some time ago to sow 8A wheat. He will go and see if they have done so, and record the result. He will then discuss the next move and make a note that C and D have agreed to enlarge their ventilators. The next visitor will see if they have done so, and so it will go on. Every visitor will not only record the work of his own department but of the others as well, and so we shall get double and treble value for all money spent on touring, and every village will have its own programme of work, which is known at once to every visiting officer of every department. No more need for vagueness and general propaganda to general gatherings, and no more wandering purposelessly from village to village, but a definite tour to definite villages to look at definite work and to suggest and discuss new lines for the acceptance of villagers who are already engaged in useful work.

CHAPTER XII

CO-OPERATION

THE best of all forms of self-help is the co-operative society, as it is not only self-help but mutual help also. It has the further advantages that it teaches organization, methodical habits, and self-government, and it fosters self-reliance, mutual confidence,

and independence. It is also able to contribute part at least of the costs of its own organization and supervision. In more than one country has co-operation raised a poor and indebted peasantry to prosperity and independence. It is the ideal method for a smallholding, agricultural country like the Punjab. Where co-operation has not always been the success it should be, it is not through any defect in the system, but in its local application and in the training of the villagers in its principles.

In the Punjab, co-operation, though it has achieved much, has not always been an unqualified success. The reason is not far to seek. In the country of its origin were men determined to raise their standard of living, but prevented from doing so by debt and disorganization. They were ready to make any effort and any sacrifice to achieve their object, they had a strong element of mutual sympathy and goodwill, and they invented co-operation as the means to their end. There was a strongly felt need and a determination to meet that need, and these, with the bond of mutual sympathy and goodwill, are the basis of all genuine co-operation. In the Punjab also were men with the millstone of debt round their necks, but they had no determination to raise their standard of living and therefore no particular desire to get out of debt.* There was certainly no link of fellow-feeling powerful enough to make them ready to sink all differences and work together, and therefore no driving force to enable them to make the sacrifices and efforts necessary for those who travel the uphill road of progress.

Co-operation was introduced into the Punjab from without, not invented from within. As the provision of rural credit, not the raising of the standard of living was the principal object of the introducers, the Credit Society was and still is the principal form of co-operative society established. As the people, or most of them, were without any social ambition or motive in joining the co-operative society, too many of them used the new system

* See pp. 2, 6-7, 19-21.

not to escape from debt but to obtain cheap credit. They swallowed the lessons of thrift and co-operative effort at a gulp, and rushed for the cheap money. No wonder, therefore, when the depression came, co-operation went through a bad time.

Looking back one is tempted to suggest that the Credit Society was not the best form in which co-operation should have been introduced to people who were reckless of debt and without the discipline and the virtues of true co-operators. It is easy to be wise now, of course, but for the future the policy is to approach credit through the training and self-denial of thrift and better living.

Those, however, who merely point to its failures and say they have no use for co-operation, are speaking in ignorance of its principles, of its history in other countries and of what it has done and can do in the Punjab itself. Co-operation was not the only financial structure that found itself in trouble when the post-War boom came to a sudden end and co-operation stood the strain much better than most. Over-borrowing there had probably been in certain cases in spite of its discouragement by the supervising staff. But deliberate over-borrowing was a minor cause of difficulties. The principal causes were first the depression itself and then the over-financing which had taken place not because of cheap money but because of the general inflation of credit and the enormous rise in the general standard of living caused by the boom.

Co-operation is a means—for the smallholder and the villager, the ideal means—of saving those who are determined to save themselves, and so to rise in the scale of human existence.

The organization and supervision of co-operative societies is a technical business and those who have not been fully trained in its principles and practice should not meddle with it, as unsound co-operative societies do more harm than good. Above all, let no one press for immediate results and think that he can sow his district with societies in a few months. Co-operation is not

merely a matter of registers and entrance fees. It begins in the heart, and until it begins there it can never hope to be a success. Co-operation to be of any use must be a slow and difficult growth, depending on the absorption of stern principles of discipline and self-sacrifice, self-help and mutual help, and it is this anxiety for quick results that has in some cases given the movement a bad name by starting innumerable societies which had no roots in the hearts of their members.

This does not mean that social workers should have nothing to do with co-operation. Far from it. Stir up the people to organize themselves co-operatively for all their needs, visit societies and discuss their work with the members. Keep in close touch with the co-operative staff so that your energies may be applied in the best way possible and you may be of greater use to the movement. But leave the expert staff to select the time and the place for the starting of actual societies and to supervise their technical working. So, too, the general direction of credit policy and methods must be in the hands of experts, whether official or non-official. The marks of a good society are work done, interest displayed by members in its proceedings and knowledge of the rules, absence of parties in the society and, when money is concerned, the proper application and the prompt repayment of loans, the absence of big loans to committee men, and a reasonable amount of reserves, deposits by members, and owned capital of all kinds.

I. PRINCIPLES

For successful co-operation there are, besides common honesty and a spirit of mutual goodwill and sympathy, two essentials: a well-felt and generally felt need, and such a burning desire to meet that need that those who feel it are ready to join together, to sink all their differences and to help themselves and each other.*

* It is interesting to note that the principles of the Boy Scout movement are almost identical with those of the co-operative movement: integrity, self-help, and mutual help. These of course are the foundations of all civilized life.

When the organizing agency^{*} has found such a need, or has taught the people to see their needs and has inspired them with the urgent desire of meeting them, then and then only can a successful co-operative society be established. The reduction of ceremonial expenses^{*} was just such a need, and the co-operative department very successfully organized Better Living societies^{*} to meet that need. These societies are now extending their activities to 'uplift' of all kinds. A still more deeply felt need in the more advanced parts of the province is the consolidation of holdings.[†] By inheritance and other forms of transfer and alienation the farm holdings have got so scattered that a man with a six-acre farm may have thirty or forty fields scattered over the whole area of the village. The farmers are desperate. They cannot plough, they cannot watch their crops, new wells cannot be sunk, irrigation water is wasted, and causes of quarrel and dispute are innumerable. They are ready to do anything, even to give up the fields they and their forebears have farmed for hundreds of years, even to abandon their pet feuds and quarrels, if only by a process of mutual exchanges, they can get all their land together in one or two places instead of twenty or thirty. Here is the ideal opportunity for co-operation. And co-operation has seized it and is here seen at its very best. A visit to the villages where the latest methods of consolidation are in vogue is an inspiration. Not only are the fields being re-planned and re-allotted, but the whole lay-out of the village is being re-done, roads are being straightened, widened and raised, ponds and depressions round the village are being filled and new ponds dug in more suitable spots, recreation grounds are being provided, an area for refuse pits set aside, pits are being dug, even rose hedges planted on both sides of some of the roads, while in some villages they are already thinking of rebuilding the whole village on a new plan. Brick kilns, graveyards, and burning-ghats have been re-sited in more suitable places, occupancy tenants have been settled with—in most cases receiving ownership of

^{*} See p. 158.

[†] See pp. 160, 181, 184.

three-quarters of their tenancies—adverse possession which could probably have been established in the law courts has been abandoned, and other awkward obstacles have been removed to suit the new lay-out—those who know the Punjab will realize what a wonderful spring has been touched to make all this possible!*

The stimulus of successful co-operation, the realization that joint effort will defeat every difficulty, and the complete break with the past involved in giving up their ancestral land has at last roused the people to make a real job of it and to put their homes, farms, and village right with one big co-operative effort. So much so that I am tempted to suggest that the whole of the efforts of rural reconstruction—outside the Canal Colonies, of course, where the holdings are not yet fragmented—should be confined to the area where consolidation has been or is being carried out, and the biggest share of all money available should go to the organizing of further consolidation. Not that consolidation should be done free of charge. Nothing should be free of charge. Those who really want consolidation—and it is no use touching those who do not really want it—are only too willing to pay at least a share of the cost, and are already doing so. The law recently passed to assist this work may enable the cost to be reduced, but a certain amount of public money will always be wanted; this should be found without stint, and the whole organization of co-operative consolidation developed to the maximum that is possible without reduction in the quality of the work or in that most essential part of all rural work, supervision.

One mark, and alas only too rare a mark, of a good bank is a number of debt-free members who have joined, not for what they hope to get out of it, but to help their neighbours and village. These, and those who have deposits in the bank, will exercise a

* Many villagers from the tract where this is going on have spent a large part of their lives abroad. They have seen better things and are determined to have them in their own homes.

very healthy influence in restricting borrowing to genuine necessities.

Each different activity usually requires a special society and it is right not to confuse the members by having too many objectives in one society. Otherwise the main objective may be overlaid by subsidiary activities—less important but perhaps more spectacular—and so get forgotten and neglected. For instance, if a credit society fails through omitting to collect its instalments of capital and interest, it is little consolation to the movement or the members that they had a famous football team. At the same time a reasonable amount of 'better living' or civilization should be the object of all societies, whatever their principal object, as the end of all co-operation is a higher standard of living—the increase of happiness. It is little consolation to the family of a co-operator who dies of tuberculosis from neglecting to ventilate his house, that his society was in the first grade. Whatever the object of the society it will obviously be assisted if the members follow the common rules of health and better living.

In the Punjab all co-operative societies are graded according to the quality of their work and financial standing into four classes: A, B, C and D. D is hardly worth the name of a co-operative society. C is a bit better, but in co-operation as in everything else, what is worth doing at all, is worth doing well, and every member should strive to get his society into the top class or at least into B class. An A class society is completely independent of official control other than the statutory annual audit.

Good societies have a common good fund from which, with the sanction of the supervising authorities good causes—from training a dai to mending a well or buying a football or a newspaper—can be helped. An excellent system has been developed in the Punjab whereby money is found by certain co-operative societies for a few veterinary appliances and medicines, and for current expenses. Three members from each society are trained in veterinary first-aid and animal management, and they

establish first-aid stations for animals in their villages. A small leaflet of instructions has been printed, veterinary officers keep their eye on the stations, and the stations work in close touch with the veterinary hospitals and send on cases to them when necessary. This system is now being extended to first-aid for human beings.

A good and well-established society can from the example of its members and its common-good fund give great encouragement to the general movement of better living in its village and can, of course, support district organizations such as the Red Cross, Boy Scouts, the village newspaper or the *Dehat Sudhar* Committee. A co-operative society can and should be in every respect a 'good citizen'.

Village industries and handicrafts can only hope to survive in competition with mass production and power machinery if they are organized co-operatively, both for the supply of implements and raw materials, for finance, for the improvement of methods and processes, for obtaining new patterns and designs, and for marketing. Otherwise, the margin of profit is so small that the cottage producer will either be driven out of business altogether, or the middleman—financier, or distributor—will get what little profit there is while the producer remains the poor and sweated serf he has always been.

It is just as important to organize women co-operatively as men, but their societies are dealt with in the chapter on Women's Work (page 120).

II VARIOUS KINDS OF SOCIETIES*

It is impossible to describe all the various kinds of societies*. Let us give a short description† of several.

(i) *Better Living societies*. This form of society has a very comprehensive programme and embraces almost the whole field

* There are about 19,000 Credit Societies and 4,000 others at present in the Punjab, with 800,000 members and Rs. 19,00,00,000 capital.

† The following notes have been very kindly written for me by Mr. J. C. W. Eustace, I.C.S., and Syed Zahur Hussain Shah, of the Punjab Co-operative Department, and are reproduced verbatim.

of rural reconstruction. It is intended to improve life in the villages in all its aspects. All who join a Better Living society undertake to lead an improved life in conformity with the rules of the society or in default to pay a fine imposed by the committee up to a maximum amount laid down in the by-laws. It seeks among other things to reduce ceremonial expenditure, improve the sanitation of the village, reform unhygienic habits, organize village games, etc. A Co-operative Better Living society offers one of the best methods of rural reconstruction as it provides a permanent local organization and receives regular supervision.

(ii) *Cattle Breeding societies*.* Figures show that after payment of old debts expenditure on cattle is one of the heaviest items in the cultivator's budget. Except for a few special areas the average type of cattle found in a village is of poor quality. The animals are weak, liable to illness and unable to produce good young stock. Co-operative Cattle Breeding societies attempt to raise the standard of cattle in the village. A society arranges or persuades the District Board to arrange for a pedigree bull. Scrub bulls are eliminated and each member is expected to keep at least one approved cow. A record is kept of the coverings and the stock is regularly inspected. Societies in Amritsar District have been very successful in importing not only pedigree bulls but pedigree heifers as well. The successful breeder benefits not only by having improved bullocks for his own use but is able to earn a steady income from the sale of his bullocks to his less fortunate neighbours. At present attention has been mostly paid to the breeding of improved bullocks for draught and for plough. Societies can also be formed to improve the milk yield of cows and to improve the breed of buffaloes, sheep and goats.

(iii) *Arbitration societies*. Litigation has for long been a curse in the province and, until the depression, lacs of rupees were spent every year on cases which could very well be decided in the village. Co-operative Arbitration societies attempt to

* See p. 95.

include at least one person from each family in their village. Members when they join agree to bring their differences to the society before taking them to court, under the penalty of a fine. A panel of arbitrators is chosen by the society and each disputant is free to choose one arbitrator, while a third may be selected on behalf of the society. These arbitrators then hear the case and as they are fully aware of the true facts give a correct decision. In a good arbitration society where members are convinced of the advantages there are seldom any appeals against the arbitrators' decision.

(iv) *Consolidation of Holdings societies.** Consolidation of Holdings societies are now started where the whole village not only wishes the work done but is also prepared to pay for it at an agreed rate of so many annas per acre. The owners then place all their land in a common pool. The roads and paths are then fixed and also land which is to be left aside for any common purpose (as for example a school or playground). A road is made round the village and plots allotted in which each member can start his manure pits. The remaining land is then divided up amongst members in proportion to their original holdings. Several thousand fields are reduced to a few hundred and it is seldom that any cultivator has at the end more than three or four fields.† Several are always able to combine all their land in one place. One immediate result in a consolidated village where well-irrigation is possible is the sudden increase in the number of wells. Efforts are now made to follow up a Consolidation of Holdings society with a Better Living, Better Farming, Fruit Growing or other type of society which will continue the work which has been so well begun.‡

(v) *Industrial societies.*§ The industrial revolution has come late in India but during the last ten years the increasing import

* See pp. 155, 294 (2), 301 (19).

† The ideal of one plot per cultivator has just been attained in one village.

‡ Consolidation of holdings consolidates men as well as land and the unity and enthusiasm produced by successful consolidation should never be allowed to die away.

§ See pp. 235, 294 (4).

of factory-made articles together with the start of factories in the province has seriously affected the position of the village and town artisan and cottage worker. These men have for generations supplied the villager with all his wants, with his clothes, his oil and his luxuries. Individually there would appear to be little hope for the survival of the handworker. Industrial co-operative societies alone offer some solution. These societies have been specially organized amongst handworkers for very definite objects. They endeavour to reduce the cost of the worker's raw material by purchasing in bulk in the cheapest market. They advise the worker of the prevailing fashions and try to improve the technical side of his work. Finally they try to find a market for the finished articles. One of the greatest difficulties under which the artisan at present suffers is that he is entirely in the hands of the moneylender and bazaar agent. The latter advances him the raw material at high rates of interest and takes in repayment the finished articles at far below market rates. Industrial co-operative societies provide members with cheap finance and when able to sell members' goods almost the whole of the profit is given to the members. During the last two years there has been a considerable revival amongst these societies and it has been found that in certain lines the co-operative handworker is fully able to compete with factory-made articles.* Most of the industrial societies are amongst weavers, but they also include shoemakers, tanners, carpenters, furniture makers, oil pressers, potters, basket makers, glue makers, tailors, dyers, rug makers, sports goods makers, metal workers and others.

The following is a list of some of the kinds of societies already working in the Punjab:

1. Rural thrift and credit
2. Urban thrift and credit
3. Thrift and savings (for men, women and children)
4. Co-operative stores

* See pp. 45, 235.

5. School supply
6. Commission shops
7. Industrial (weavers, leather workers, carpet makers, etc.)
8. Consolidation of holdings
9. Better farming
10. Cattle breeding
11. Sheep breeding
12. Fruit growing
13. Silt clearance
14. *Cho** reclamation
15. Land revenue redemption
16. Compulsory education
17. Arbitration
18. Better living
19. Land Mortgage Bank
20. Adult school
21. Lac producing
22. Crop failure and relief
23. Medical aid
24. Veterinary first aid.

Here are some types of societies which it is hoped to organize in the near future:

25. Milk supply
26. Milk recording
27. Dairy society
28. Poultry society
29. Fishermen's society
30. Cattle insurance
31. Ghee society.

This list is not exhaustive.† As the Rural Reconstruction movement spreads and deepens, new needs will arise and as the co-operative spirit grows, co-operation will design the best

* Land destroyed by hill torrents. See chap. vii.

† See p. 238.

organization to meet them. ¹ Even water supply, medical aid and trained dais can be co-operatively provided.

In fact there is probably no need of the rural community that cannot be co-operatively supplied. Meanwhile the discipline of thrift, joint endeavour, and better living will prepare the villagers to make the best use of that very difficult form of co-operation, the credit society.* *Marketing of produce* is still more difficult but co-operation must tackle it, and in time will do so, when by a better understanding of the co-operative movement, its peculiar virtues of honesty and mutual goodwill have become more widespread and more deeply engrained in the people.

Once villagers realize the value of a co-operative institution and are ready to put their hearts into it, the naturally homogeneous character of the village is of the greatest assistance in binding the members together. The Punjab villager has a great advantage over many other co-operators by being a member of a *baradari* (brotherhood) and of a self-contained village and he *should be made to realize this*. *At the moment, however, in spite of the homogeneity—or perhaps because of it!—the Punjab village lives a cat-and-dog life with its factions and parties, and much of its troubles and of its poverty and debt are caused by this curse of strife*. Nothing is more needed than the spirit of co-operation, of the good neighbour. Mutual goodwill is the essence of co-operation, and in a co-operative society, every member is his neighbour's keeper. The more we can get of this in the Punjab, the better. The committee of a co-operative society, if impartial and respected, can do much to preserve peace and harmony in a village. There is, however, one society, the Co-operative Arbitration society,† especially designed

* A very promising experiment has been started in several districts whereby members of co-operative societies market grain through approved and registered dealers (*arhtas*). The dealers give them a receipt and remit the price to their co-operative society.

† See p. 159.

to prevent and to liquidate disputes and quarrels, and the Punjab cannot have too many of them.

Co-operation is the cement which holds together and consolidates the edifice of rural reconstruction, and without it, or without a well-established panchayat, our efforts will be but temporary, and any building we erect will sooner or later disintegrate. What is worth doing at all is still better worth doing co-operatively. The progress of the country could be built on no surer foundation than that of co-operation. But it must be true co-operation and not any imitation.

For true co-operation, trained and adequate supervision is absolutely essential. At no period that can at present be foreseen, will it be possible to expand the movement beyond the available supervising staff without bringing certain disaster. If, therefore, progress is desired and the co-operative way is to be followed, money must be found in steadily increasing amounts. It is probable that co-operative societies can and should be made increasingly to contribute to the costs of their organization and supervision, but whether it is co-operative or taxpayer's money or both, it must be found freely if co-operation is to expand to keep pace with the need and the desire for national progress. And no better use could be found for money.

CHAPTER XIII

THE VILLAGE SCHOOL*

THE intellectual centre of the village is the school.† It should develop and maintain rural culture and help to make the boys and girls grow up better villagers. Unfortunately in India, as elsewhere, urban ideas and urban curricula have for long been killing village culture and spreading the desire for an urban type

* The first two chapters of the *Report on Vocational Education in India* (1937) should be most carefully studied. They concern the primary and middle schools and are written by Mr S. H. Wood, M. C.

† See *The Village Dynamo* (English or Urdu, Gulab Singh and Sons, Lahore, 4 as.). See also p. 293.

of life, with the result that the village and its ways and even its dress have fallen into contempt, and the villager looks more and more to the towns for his culture, entertainment, and everything else; and the ambition of the growing village lad is not to live in and improve his village but to be a hanger-on of town life and thought. Instead of getting the best out of village life, he gets the worst out of town life. Some colleges are perhaps the worst offenders in creating an atmosphere of hostility and contempt for rural life and rural people.

At last, however, the tide has turned and in India, as all over the rest of the world, there is a very strong movement, in which the village school is playing a steadily growing part, to help the village to recover and develop its own individuality.

The Education Department is developing, as rapidly as such a vast and scattered organization can, the rural side of the school curriculum, and the Normal Schools devote much time to this.

The Punjab village schoolmaster—in the absence of any other centre of enlightenment—has a very big opportunity and a very big responsibility. As he trains the village children, so will be the village of the next generation. His influence for good will obviously be infinitely greater if his home, as well as his school, reflects the new light, but this can never happen until his wife can share his burden, so that the first requisite of a village schoolmaster is a wife who has received a full training in the women's side of domestic and village culture.

The teacher bewails the effect of *pohh** weeks and health weeks, singing and propaganda parties and so on, upon his examination results. His best possible contribution to the cause, however, is the example of his home and school. Clean, bright, smart children arriving punctually at school are a far better advertisement of the better village movement than any amount of singing parties, processions, slogans and weeks. If the boys are really and intelligently interested in the fighting of pests and

* A very noxious and prickly weed. See pp. 217-18.

weeds, there will be no need for laborious fatigue parties to demonstrate its necessity.

The school garden or farm is too often a matter of routine. It should be the opening of the wonder book of nature. Every operation in every plot of ground should have a definite purpose, which has been carefully discussed in advance with the students. Budding, layering and grafting are excellent things to teach. In advanced areas, such as the Canal Colonies, the best use of the school plot is perhaps to teach the growing of flowers and vegetables. In backward areas, all manner of experiments and demonstrations—varieties of seed, variations in ploughing and cultivating, manures of various kinds and prepared in different ways—can be carried out in small plots and by the pupils themselves. Only in this way will the devil of fatalism and the tyranny of custom be driven out, and the villager learn how much, by the use of brains, skill and hard work, he can control or influence the workings of nature in his fields.

The objective of the village school has often been stated as the spread of literacy. The spread of good citizenship is a worthier objective with the attainment of literacy as a by-product. The health and peace of the village are largely matters of discipline, self-respect and self-control, and these are the result of the careful teaching, in early life, of clean and regular habits and a tidy and disciplined school routine. Clean personal habits cannot possibly be taught without latrines and urinals, and therefore every school must have them, and of a practical kind, too, which can be copied in the village.* The teaching of health knowledge and the putting of this knowledge into practice in daily life must always be one of the major objectives of education, and is even more important than the achievement of literacy. Fortunately, the teaching and practising of cleanliness and of clean habits is one of the very best media for the education of small children and is, in fact, almost the only discipline to which at the tenderest ages they are amenable. The laying of the

* See p. 34.

foundations of self-control and self-respect is done by this teaching and, of course, the first teacher of all these things should be the mother. But till she is herself trained, she obviously cannot undertake it, and so a double responsibility rests on the school teacher. Strong healthy children are far easier to teach than weak or sickly ones—in fact underfed or ailing children get very little benefit whatever from school—so that as a mere matter of self-interest the teacher should be interested in the health of his school. Mosquito-nets should be compulsory in the boarding house—and in the teacher's home!—and midday meals should be a matter of very serious consultation with parents and village elders.*

The district authorities, educational, health or medical, and agricultural, should try and prescribe, in accordance with the agricultural possibilities of each part of the district, scales of food both for the children to eat before leaving home and to bring with them to school for the midday meal. Where genuine poverty is proved, or the proper food cannot be grown locally, then local philanthropy or the Red Cross or some other agency must be enlisted to see what can be done to enable the children to get full mental and physical value from their lessons and games.

Reading and writing must be taught, books must be read and sums must be done, but the school games and the school farm and garden and the teaching of a clean and regular and orderly manner of living are probably the most important parts of the village child's education, and it is for the examinations to accommodate themselves to such a curriculum rather than for the curriculum to be sacrificed to the examinations.

A common complaint is that literacy, hardly won at school, is soon lost after leaving school, while adult illiterates have no desire to achieve literacy. This will persist until the village mothers are literate and there is an ample supply of good read-

*See p. 105.

able books, magazines and papers for all classes of the population, and a small library in every village.

Arithmetical problems can illustrate many of the lessons of village life, the multiplication of pests, the cubic content of pits, the difference in money value of the yield of good and bad seed or good and bad methods of cultivation over various acreages, the earthwork required to raise the village road, the result over a period of years of various rates of interest, the cost of various extravagances compared with the cost of various improvements, the result of productive and unproductive expenditure, and so on. The rural science subject of the Punjab middle schools is an excellent means of applying the principles of science to the facts of village life. The different kinds of hay-box can be tested with a thermometer, the necessity for ventilation can be demonstrated with candles and cardboard houses, mosquitoes can be bred in glass bowls. Their life history and that of flies, and the trying out of methods of destroying both, are as useful for Nature Study as any other creatures. It is only a matter of ingenuity and initiative to make the subject rural, practical and scientific.

General Knowledge should include some details of savings banks and co-operative societies, the various breeds of cattle and kinds of seeds and implements, the acreages of various crops in the district and province, the incidence of disease and child mortality, and other population figures for the district and province, the round figures of the main items of local and provincial budgets, weights and measurements, postal,* telegraph and railway information, and traffic rules, so that the villager may take a lively and growing interest in the world around him.

The schoolmaster has been made responsible for the keeping of the schoolchildren's vaccination record and he has a register for this purpose; but he very rarely uses it aright. He often hands it to the vaccinator to fill in! And yet the business is very

* The Post Office issues a one-anna guide in English and in eight vernaculars and cheap posters combining instruction with decorations. Schools might well buy these.

simple When a boy enters school his arm is examined. If there are no vaccination marks he is vaccinated on the first possible occasion. If marks are found, unless the date can be found in the village vaccination record, a note is made in the first column that vaccination marks are present. If the child is six or more years old a second vaccination is immediately done and recorded and so on every six years until the child leaves school. If he goes on to another school he must take a copy of his record with him Each vaccination, first, second, and so on, should be on a special part of the arm, so that one glance will tell how many a child or a grown-up has received.

Games. Games are very definitely a part of education, but good games mean careful thought and organization. Much time is often wasted in starting them When the games period comes the boys move out slowly and are a long time being pushed and pulled and shouted into some sort of formation, and many groups do not seem to be able to carry on at all without the masters to keep on handling and exhorting the boys. The groups are far too big, as usually each class, however big, forms one game There is no variety of games, the games are often dull, and many of them are played quite wrongly so that they are no fun at all. Games must be so interesting that boys will play them for their own sake and not at the exhortation of the masters, and the rules must be carefully taught so that they are always played the right way The games period must go with a snap and all games must be played keenly and according to the rules, otherwise half their value in promoting health, discipline and the team spirit is lost

Games are undoubtedly at their best when the masters join in themselves and do not merely stand by and supervise. There are innumerable good games, and the ones chosen must be suited to the ages and sizes of the boys who have to play them. Small boys must be put into small groups, otherwise many of them get no share of the game and stand still getting bored while they watch the few who do play running round such big circles that

they are tired before half-way round and hate the whole thing. The little boys may want the help of a master. The bigger ones should certainly learn to play properly and to keep the rules by themselves, without any supervision at all.

For a quick play-for-all period, divide the playground into the right number of spaces for your groups of boys and on each space mark out a game. Select one of every kind of game, running, walking, jumping, quick-thinking, round, square, ball games, games in lines, and so on, so that there may be no monotony, and then put them in such an order on your playground that the running games alternate with stationary or slow-moving games and boys will not get hot for half the period and cold for the rest. You may want two sets of games; one for bigger and one for smaller boys. When you blow the whistle for the games period every boy knows on which space his first game is to be, and he will run straight to it and start playing. When the five minutes' whistle blows every group moves on one space and starts the game marked out there. In half an hour every child has played half a dozen good games.

Every game must have a name so that boys can be told, if necessary, which game to play. Every few weeks one or more of the games must be changed, but some are so popular that they never need changing. Long jump and high jump should be practised regularly. They are very good for teaching co-ordination of brain, eye and body, they encourage sprinting and develop many muscles, and if all the schools practise them, in a short time the very low standards we now have for both long and high jumps will rise. Keep careful records of both long and high jumps as nothing makes boys keener than the hope of beating a class or a school record.

Singing. If the teacher has no voice and no ear for music, he should leave singing alone. Bad singing is terrible and does no good to anyone. When singing is taught, don't allow one or two boys to do all the singing. Teach as many boys as you can and have as many choruses as possible for all to join in. Don't write

your own songs unless you happen to be a good poet. Get them from the District Inspector of Schools. Rubbishy songs are worse than none at all and it is unfair to make children learn by heart anything but the very best. Avoid long dull songs and don't be always writing stupid songs in praise of whoever comes to visit your school. Get a decent set of songs, with good jolly tunes, about useful and interesting things that the boys will enjoy at all times, and when visitors come sing a verse of each of them and let different boys sing different songs so that they may know how many songs and singers you have got.

All boys love tamashas, so have a tamasha every now and then for the village people when they will see what you are doing and how the boys are getting on at your school. They can learn your songs, watch your games and your dramas and be shown any models and exhibitions you have made, and be taught something about improving their farms and homes. Take your boys to villages and *melas* round about and show the people there all the things you are teaching and practising in your school. When you make models, posters or exhibits remember that half their value lies in the making of them. The boys who make them have to learn a great deal about the subject they are illustrating and the actual handicraft of making them is another valuable thing. So when you have made a thing, use it for a tamasha or a *mela* or two and then present it to the boy who made it, to hang in his house or to give to the village to put in its meeting-place. Then set to work and teach other boys to make another, to a new and improved design.

Above all, practise what you preach. Do not make songs, posters or models of pits or latrines and vaccination and then have no pit or latrine at your school and allow unvaccinated children in your classes. Teach nothing that you do not practise in your school and in your home, otherwise you will do no good and no one will respect you.

Nature study. Watch the birds and study their habits. Draw up lists of those birds which help the farmer by eating grubs and

moths and insects and of those birds which harm the farmer by eating his grain and fruit. Develop the boys' curiosity. Try things out and don't take everything in the books on trust. When you discuss malaria, go and catch the young larvae and keep them till they hatch. When you find a caterpillar keep it and feed it, and see what sort of moth or butterfly it will turn into.

Self-help. I find expensive indoor games in some schools and volley-ball nets bought from the shops. Teach the boys to make their own nets and their own indoor games. With a pocket-knife and some wood, cardboard, paper, glue and coloured pencils you can make nearly every indoor game you want to play, and the making of them is nearly as much fun as the playing of them. Do try to develop the ingenuity and handicraft skill of your boys. In one school they said they could not play football because they were not allowed to leave their goal-posts standing in the field between games. What rot! Carry your posts to and from the field every day and don't say you can't play football!

Visitors. When an important visitor is expected, do not get all your boys out and keep them idle and possibly shivering or stewing for hours. Play games, sing songs or go on with your lessons, but do not sit or stand about idle. As soon as you see your visitor approaching, start your programme—burst into song, begin your games or whatever it is—and let him arrive while it is going on. He is probably a busy man and has to move on elsewhere when he has had a look round, so do not delay things. Above all, do not hold him up at the gate while three boys sing a long song of welcome. He wants to see all the boys, not three only, and the boys want to see him, so take him among the boys straight away.

Contacts. The school is but one of the means by which the teacher teaches. He must be in close touch with the parents, and by whatever means possible must spread enlightenment in the village whether it is by a games club, night school, readings, wireless group, or any of the other village associations described in this book.

All this is very easy to say, but what about the village teacher? His education is slight, his pay is slighter, and he has not the cultural and social backing of a squire or vicar. Isolated from his fellows and from all contact with the stimulus of new ideas and information,* how will he avoid slipping into a deadly groove of monotonous school routine that utterly fails to interest or stimulate his pupils or their parents? This, of course, will be less difficult if his wife has been trained in the same ideals as himself. Wireless and a good village newspaper, plenty of refresher courses and rural gatherings of all sorts are the only remedies possible for this threat of stagnation, and are more than sufficient excuse for expecting the village schoolmaster, if only for the purpose of keeping his own soul alive, to take a leading part in every rural activity.

Within no period that we can foresee will every child learn to read and write, and yet adult education bristles with difficulties. We now have the new Laubach method, with basic vocabularies of Urdu and Punjabi to support it, by which literacy, it is claimed, can be achieved and passed on with ease. But the hard fact is that the average adult villager does not want to read. If he did, he would soon learn as there are enough literates about now to start movements similar to those in Mexico and China. Adult education will always be difficult until there is a really strong desire to learn to read, and that will only come when there is something—books, newspapers, etc.—which the people really want to read. In England the urge came first from the Bible, and now it is the football results! The lesson is the same. Produce something which everyone *must* read. One wonders whether Roman Urdu, with its ease of printing and reading, will not be the final solution of rural illiteracy.

As for the district authorities, they can give great encouragement to education by visiting schools, by being easy of access to

* A 'Book of Knowledge' is very much wanted, dealing alphabetically with all the common Punjab things a Punjabi should know. A Punjab Year Book is another great need.

the inspecting staff, and by displaying intelligent interest in the work. One of the tests of efficiency is the even flow of promotion from the first class upwards and the absence of a big and stagnating first class. The best teacher of the tiny child, whether boy or girl, is of course, a woman, so that the best remedy for this stagnation is female teachers for the infant classes.

A word to Assistant Commissioners and others who visit schools. Never mind the instructional efficiency of the teaching staff. Government keeps a trained inspectorate for that. Your visit is something special, and let it remain so. Try and make it a treat for the children, as well as merely a bit of routine work for you. As clean habits are the foundation of civilization, start with a look round to see that all is clean within and without, paper and litter not thrown over the wall or out of the back windows. See that there are soap and water and a decent clean latrine and urinal; otherwise, clean and regular habits cannot be taught. See if the children are clean, bright and happy; have a look at eyes, nails and hands. See a few vaccination marks. Ask a few questions about crops, health and other matters of general interest. Do some knots and law with the Scouts. If you don't know these things already, learn them up beforehand—it is well worth while. Watch the games for a minute or two and, if you possibly can, teach them a new one. Then try them at animal noises—make some yourself if you can!—and end up with cheers for the King-Emperor; teach them how to cheer if they don't do it well. They will never forget your visit and you will at any rate have made one dull school day bright!

Scouting. Scouting is a particularly useful activity but it must be proper Scouting. The only way to get value from a game is to play it according to the rules, and the game of Scouting is no exception. A fully-trained Scoutmaster is essential for a good troop, the troop must be affiliated to the provincial association, and a proper record kept, in the proper register, of the boys who are enlisted, and of their progress in Scouting. Above all, boys

must be entered at the earliest possible age so that they may imbibe something of the principles and spirit of Scouting before they leave school, instead of being squeezed into a uniform in their last year at school in order to form processions and arches of staves.

The ambition of every school troop must be to have as many King's Scouts and First Class Scouts as possible. A mere boy in uniform is no Scout, and he should not be allowed to wear uniform till he has passed his tests and been sworn in. Stockings should only be worn when the wearer knows how to darn them. The shoe-lace knot is a form of reef-knot and must always be tied as such. Whatever uniform is worn should be clean and tidy—not necessarily new or expensive. There are badges to be won for every kind of useful and interesting activity, and every Scout must be encouraged to work for badges. In a country where tempers are quick, and dirt, disease and sudden death abound, the Ambulance and Health Man badges should be earned by every Scout as a matter of course. This may mean hiking to the nearest doctor to learn but it is well worth while. A few good Scouts are worth many indifferent ones, and to teach eyewash to growing boys is an unforgivable sin.

Do not allow boys to join who have not been vaccinated and re-vaccinated properly. Make this a condition of joining and enter their vaccination dates in your troop register. See also that your boys' families are properly vaccinated and re-vaccinated as otherwise your Scouts cannot help in social work for fear of taking germs home with them and infesting their sisters and brothers.

You cannot wear ear-rings and other trinkets in Scout uniform as they are a breach of the ninth Scout law. Teach your troop about savings banks, thrift and co-operative societies of all sorts.

Have a triple objective for your troop and its patrols:

(i) A games objective: Select one or more games by patrols or for the troop and become really expert at them and beat all the schools and villages around.

(ii) A badges objective: Select certain badges by patrols or for the troop and go for them whole-heartedly.

(iii) A social service objective: Let one patrol be a pit patrol, another a vaccination or window, a dramatic or song-singing patrol, and so on. The ventilation patrol will make a wooden frame, say two and a half feet by one foot, fit it with wire gauze, and persuade the owner of some dark, unventilated house to let him put this into his house just below the roof. The patrol then makes another and puts that in somewhere else and so on.

Tackle each village trouble at the right time. Dirt is always in season, but don't preach vaccination in July or quinine in December. A good way of encouraging the use of good seed is for the boys to get their own parents to sow it and have a well advertised school competition at harvest time to see who can produce the best plants of wheat or the best heads of *bajra* or cotton, etc., from their fathers' fields. The winning specimens will be put on the walls of the school till better ones are produced next year.

One of our besetting sins is slackness and slovenliness. We are always saying, 'That is good enough,' 'Why bother?', 'No one will see it,' and so on. The remedy is Scouting, but only if you Scout properly. If you Scout at all, Scout smartly. Better no Scout than a slovenly one. Teach personal pride—pride in our work, pride in our games, pride in our troop turn-out. If you do this, your boys in later life will take pride in their farming, pride in their honesty, pride in their homes. The boys will never thank you for allowing the troop to be slack and slovenly, so do not think you are being kind to your boys by letting the troop get slack. No, you are just letting yourself and the Scout movement down and spoiling the best chance of fun your boys will ever have.

Do make Scouting practical and make it part of your own daily life and part of your boys' daily lives. All Scouts know their knots, but how many tie their shoe-laces properly? All Scouts say mosquito larvae must be killed, but how many know them when they see them? How many have collected them in a

glass jar and seen them hatch out so as to be sure of them and to convince villagers also that the little wrigglers in the water really do turn into mosquitoes? How many Scouts use quinine and mosquito-nets themselves? All Scouts know about 8A wheat. How many get their fathers to sow it and actually see it grow and see how much better it is than other people's? Scouts all talk about the good turn. How many really do it? Many Scouts do a thoroughly bad turn every day by using the ground round the village as a latrine, instead of using a pit or trench. One good turn is to escort your little sister to school every day. Another good turn is to weed your father's fields, not with a squat-down *kurpa* but with a stand-up manly long-handled hoe. Make all your Scouting practical and make it all part of your every-day life.

Always remember that Scouting is a game and there must be plenty of real fun and play as well as uplift and badge work. Above all do not use the Scout troop as a means of attracting attention to yourself and thereby obtaining promotion. Promotion may or may not be your happy lot, but it has nothing to do with Scouting. Do your duty by your boys and your village and nothing else matters.

CHAPTER XIV

DISTRICT ORGANIZATION

To produce the best results in rural work, the district requires organization just as much as the village. If everybody goes his own way without co-operation and without co-ordination, effort will be dissipated, money wasted and people will soon be pulling in opposite directions.

In the absence of strong non-official organizations, the best, in fact the only, possible centre is the official head of the district, the Deputy Commissioner. It is his duty so to lead, inspire and organize the efforts of all good citizens, official and non-official,

that there is no waste or overlapping, no gaps and, above all, no jealousies or factions. Experiment and experience have produced two co-ordinating bodies, the inter-departmental committee or Officers' Board, and the District Community Council, now called the *Dehat Sudhar* Committee.

1. THE OFFICERS' BOARD

At reasonably frequent intervals, according to local needs, and at least once a quarter, the Deputy Commissioner invites the local representatives of every department of the Local Government and the Government of India to meet him. There they discuss their problems and difficulties and thrash out a joint plan of campaign for the period until the next meeting. Any little differences between one department and another are settled, and by mutual discussion and arrangement each department sees how it can best help every other department, and so get the best value for the money and effort spent by Government. Every department has a contribution to offer, and there is none that will not be the better for the help of other departments. No department can give help until its fellow-departments say what they want, and no department can expect help if it does not tell the others what it is doing and where and how, and what are its difficulties. The day of water-tight compartments and of departmentalism is over. There is so much work to do and so little staff and money to do it with, that every official must do all in his power to find out what his brother officials are doing and to help them to do it. All this the Officers' Board makes easy and possible.*

The procedure is simple and informal. It is probably best for some junior official to act as secretary of the Board. He extracts from all departments, well in advance of each meeting, a short note about their work programme, and their suggestions and difficulties. From these he draws up and circulates a rough agenda

* See p. 210 n.

and a very brief progress report for the period since the last meeting. Minutes should be kept of all the important decisions reached at the meeting and particularly of all plans agreed upon for future work. Copies of the minutes should go to the representative of every department working in the district and he should send them to his superiors. In this way the divisional representatives and the heads of departments come to know exactly what is going on in each district and can in their turn co-ordinate their own efforts in such a way as to be most helpful to the district campaign. Nothing is more encouraging for the district workers, official and non-official, than to find that the higher officials when they visit the district know exactly what is going on and are all out to back up the local programme. The chairman is, of course, the Deputy Commissioner, and his presence at every meeting is essential, but he may occasionally invite a senior officer of some other department to preside. To the Officers' Board, it is common to invite representatives of local bodies and also of the Boy Scouts, the Red Cross and local missionary organizations and any really conspicuous non-official worker or leader, provided, of course, that he is actively engaged in rural reconstruction work. Divisional Commissioners make a point of occasionally attending these meetings.

Once officials begin to claim exclusive credit for work done and to run down their colleagues, the villager stops working, as he begins to realize that it is not his good which is the objective but the personal advancement of individual officials. If the Officers' Board is carefully organized and developed, all this jealousy will disappear, and the district officials will soon be working loyally together as a team.

II. THE DEHAT SUDHAR COMMITTEE

The *Dehat Sudhar* Committee is copied from the Rural Community Councils steadily being developed in the counties of England by the National Council of Social Services. In 1923

the Ministry of Education introduced the idea to the Punjab, but except in a few districts, notably Jhelum, Lyallpur, Amritsar, and the Khanewal subdivision of Multan where they have a big roll of paying members, a budget, a policy, and a programme of work, the idea has not yet been fully exploited. The object of this association is to co-ordinate and develop every kind of philanthropic endeavour, both official and non-official, particularly non-official, and to make the very best use of everyone who has any contribution—work, money, or ideas—to offer to the solution of rural problems.

In a well-developed council there are four kinds of members:

(i) Ex-officio representatives of Government Departments.*

(ii) Delegates from local organizations, official, semi-official, and non-official, engaged in social work, such as District Board, Red Cross, Boy Scouts, Soldiers' Board, missionaries (where they are engaged in other than purely evangelistic activities—e.g. medicine, education, or depressed classes), Girl Guides, Women's Institutes, etc.

(iii) Paying members, including patrons and other superior classes of members who contribute special sums for special privileges.

(iv) Delegates from village associations and societies of all kinds which pay a small fee for affiliation.

The only real basis of a good *Dehat Sudhar* Committee is paying membership.† Where people's money is, there their heart is too, and, without this test of enthusiasm for rural welfare, a council soon degenerates into an occasional gathering of people invited by the district officials. Once membership is by payment and is open to all who are willing to pay the small sum necessary to entitle the payer to attend the meetings, the council becomes alive. The members meet together to decide how to spend their own money, and with the help of experts to thrash out a policy and programme of rural reconstruction suited to the needs of their

* Many officials of course insist on joining in their private capacity as paying members.

† See p. 15.

own particular district. The decisions of such a council command respect in the district as the voice of a real district panchayat. Simple rules of business are, of course, required, and it is advisable, in order to give all members a chance of attending, to hold some of the meetings at various rural centres in the district. The first duties of a council are to collect members and funds, to draw up a programme of rural improvement, meeting by meeting, to make plans for its execution, and if possible to arrange for a village newspaper—either utilizing an existing one, starting its own or encouraging some other person or organization to start one—so that the fullest information of all activities and suggestions may be disseminated all over the district and thereby double value be reaped for all work done and money spent.

There is no need for the Officers' Board to collide with the *Dehat Sudhar* Committee. The Officers' Board is, as its name shows, an official affair, a cabinet council of officials, where they settle all their differences and discuss how they can help each other. Many of the members of the Officers' Board are, of course, ex-officio members of the *Dehat Sudhar* Committee, and the Board itself is a sort of official sub-committee of the *Dehat Sudhar* Committee. The *Dehat Sudhar* Committee will contain every organization and every individual working for the improvement of village life. Besides being an invaluable meeting-place and forum of discussion for officials and non-officials alike, it is here that the actual programme of work is settled. By means of this council, officials, instead of deciding on their own what they think should and should not be done in the villages, can get the help of the best local opinion, and this council enables the villagers to put their difficulties and problems before the experts and get their advice. Government is enabled to apply its efforts to the best possible advantage instead of perhaps wasting time and money in doing the wrong thing, or in working in the wrong way or at the wrong time or place.

The council and the departments of Government must work

hand-in-glove. The council programme and the departmental programme are the same, and with the limited staff and resources at the disposal of Government this is the best way in which the rural public can be got to devote their time, money and effort to the improvement of village life.

In the end it is the villager, inspired and assisted by all the expert advice and help that Government can give, who must say what is to be done to put village life right and who must both do the actual work and pay for it. The *Dehat Sudhar* Committee is the centre where this co-operation between Government and people can be best organized. It is advisable for councils to have branches in the tahsils, meeting frequently, and actively engaged in carrying out the council's programme. One of the best ways in which a council can spend its money and efforts is in organizing publicity*—shows, exhibitions, competitions and tournaments, cinema tours, a weekly newspaper† and all the other things mentioned in the next chapter, so that its programme and its activities may be kept continually before the public.

In one Punjab district the tahsil is the unit and the district has a federation of tahsil councils. In another the council is a federation of village societies. It is not suggested that the above council is the only form of district organization possible, but it does create a forum where every suggestion can be raised and discussed. It enables the intelligentsia, and those social workers who are not rural magnates, in fact everybody of goodwill, to find a useful place in the scheme of village improvement. It enables money to be raised and publicity organized. Above all it is an ideal centre where official and non-official can meet and where every kind of knowledge and experience, both local and expert, can be pooled.

III. A MULTIPLICITY OF ORGANIZATIONS

A common difficulty is the multiplication of district organizations, such as the Red Cross, S.P.C.A., Prisoners' Aid Society,

* See p. 210 n., chap. xv and appendix v.

† See p. 205.

Health Centres, Boy Scouts, and so on. In many districts these are all supported by exactly the same people, so that every committee is merely a reshuffle of the same personnel, and the raising of the annual subscription means the continual dunning of the same people for various small sums of money. This is all wrong of course. There should be a sufficient number of good citizens to support every good cause with a different personnel. The good citizens are there all right, the villages are full of them, but we do not know how to tap them, nor shall we ever tap them until wireless and newspapers bring us into daily touch with every village, and until in every village there are associations and societies which will enable the villager individually and co-operatively to express his opinion and to pay his mite towards the good things he is taught to want but does not know how to get.

Meanwhile one solution of the difficulty would be to turn all these societies into sub-committees of the *Dehat Sudhar* Committee and to have a joint subscription covering them all. Thus if the full subscription were fixed at Rs. 10, Rs. 3 might go to the village newspaper, Re. 1 to the Boy Scout Association, Rs. 2 to the Health Association and so on. It is objected that this means a large annual subscription, but actually the members would pay no more than they do now. The trouble of collection would, however, be far less, and every one would know where they were, paying one lump sum instead of for ever being asked for small sums for all manner of objects. Besides, membership of these various bodies is not for the rank and file, it is for the leaders, the educated and the gentry, and even in a period of low prices these must be ready to support any organization that promises active work in the fight against the various causes and effects of all the troubles which surround us.* After all, these subscriptions are nothing to the various items of unnecessary and often harmful expenditure which these same people are cheerfully paying.

* See pp. 14, 15.

This scheme worked admirably in one district except for one association whose provincial headquarters refused to accept as its local branch a sub-committee of the *Dehat Sudhar* Committee. Once provincial bodies, however, realized the difficulties of the districts and the benefits which such a scheme offered, they would probably be only too willing to modify the wording of their rules to allow them to affiliate district branches which adopted this form. Anyway, for those districts which feel the difficulty I have described, this solution is well worth a trial.

Democracy depends for its success on three things:

- (i) Leadership
- (ii) Unpaid service
- (iii) Prompt and loyal obedience, particularly in the matter of working or paying, to the decisions of one's fellows duly assembled whether in village, town, district, or provincial capital.

These *Dehat Sudhar* Committees and the village councils and co-operative societies afford an excellent means of teaching and developing these three ingredients of success.

IV. RURAL COMMUNITY BOARDS

There is a small body at provincial headquarters called the Rural Community Board, but it does not in any way represent the district councils and is in reality an inter-departmental committee which meets occasionally to spend a small grant of Government money, principally on various kinds of publicity material.

When sufficient district councils of the kind I have described have been developed it might be useful to have a Provincial Council,* or Federation of District Councils, to which the District Councils would send delegates for exchange of experience and mutual discussion of common problems.

As in the District Councils the departments would send their representatives to provide expert advice and knowledge, and

* This and District Councils are more fully described in *A Scheme of Rural Reconstruction*, 2nd edition. (Published by Uttar Chand Kapur & Sons, Lahore, and obtainable from Boy Scout Headquarters, P. O. Walton, Lahore.)

those provincial semi-official organizations which work among villagers would send delegates, so that all the rural reconstruction work of the province might be co-ordinated at provincial headquarters.

V. LAY-OUT FOR UPLIFT AND A YOUTH MOVEMENT

The following lay-out is suggested for a village youth movement, the organization of the village and of village uplift. There is so much work to do that there need be no fear of overlapping. Co-ordination and co-operation throughout the district can be secured by the *Dehat Sudhar* Committee and its branches, and the Officers' Board. Officers' Boards used to exist in most districts of the Punjab but *Dehat Sudhar* Committees only in two or three. The best one is in Lyallpur.

The Deputy Commissioner or Collector will have to resume his old position of head of the district and take hold of and inspire all these activities.

For this purpose he must obviously cease to be the 'dog's body' for all the routine work of administration. He will have to be given really adequate staff and this staff must include a Junior I.C.S. or Provincial Civil Service (P.C.S.) Officer as social service assistant—after a special period of training for the purpose—and efforts should be made that every young I.C.S. and P.C.S. Officer should have this special training and do this special work for at least a year. If every tahsil had an extra naib tahsildar so that all the circles could be made smaller, the tahsildar and his assistants would have more time to help, and their help is absolutely essential to success.

Much of this is not new. Most of it has been successfully tried out in one or more districts but has been allowed to fade away.

(i) *The Panchayat*. The Panchayat Department has a very difficult whole-time job to teach and organize and supervise village self-government. The panchayat is the statutory authority to raise taxation and, by means of the money so collected

and by its rules and regulations, 'to organize sanitation, 'water supply (improved wells), drains, clean streets, ventilators, pits ponds, vaccination, epidemic control, lighting, roads, the village hall and community centre, radio, school attendance and to try petty cases and generally keep peace and good order. The most difficult task of the Panchayat Department is to teach panchayats to assess and levy taxation and to administer the villages. Until they do this they are failing in their main task and nothing else must be allowed to come between the Department and this basic function—the whole object and justification of its existence. The panchayat must administer the village and create the environment in which all the rest of the uplift programme can be carried out. If the Panchayat Department tries also to do general propaganda, or undertakes any other activity there will be no administration and that will make everyone else's task more difficult.

(ii) *The Village school as uplift centre.* The village school, boys and girls together in the primary and lower middle departments with male and female teachers, must weave as much of village uplift as possible into the text books and curriculum. The village school must make their children better villagers anxious to stay in the village and improve life and livelihood and not make them discontented with village life and drive them away to the towns. The school teacher will not have much time for anything else but the school, but he should be very definitely interested in the whole of village uplift and should know all about it. His home should be a model and he should be able to answer questions and take part in discussions. His wife of course should have received domestic training whether she helps in the school and Women's Institute or not.

(iii) *Village Scout troop.* A job for whole-time organizers. Scouts will if well-trained help everybody but they must first be well trained and must make Scouting a game and not be merely a sort of unpaid village drudge, as they may become if the uplift is to be put first and the game nowhere. The Scout troop

should not be merely an extension of school activities. It must if possible, be separated from the school and have an ex-service scoutmaster, with if necessary, a small honorarium for his services.

The Education Department in their own interest will be extremely helpful and friendly to the movement but they will be too busy to supervise it.

(iv) *Better Living societies.* The Co-operative Movement, with additional staff (recruited from the armed forces), must undertake the organizing of all the ex-servicemen, and as many others as wish to join, in Better Living co-operative societies, one of the first objects of which would be to establish a reading room, library, wireless set, recreation ground and games clubs, and go on to as many other items of the uplift programme as propaganda of all kinds can persuade them to adopt. The District Soldiers' Boards will be at District Headquarters, but they are an official body largely concerned with relief, employment, pensions, petitions, etc. An additional organization is wanted of the men themselves in each village for their recreation and betterment, to hold them together from day to day, maintain their loyalty and comradeship and prevent them drifting apart and quarrelling amongst themselves and losing all the benefit they got from the Army. These Societies will not be exclusively ex-service. As many non-service men as possible should be members of these 'Better Living' co-operative societies. If there is a more obvious need than a Better Living society, then let the Co-operative society meet that need—the great thing is to get all the ex-soldiers and as many others as will join them united co-operatively.

(v) *The Village Guides.** The Department and person of the Commissioner, Rural Reconstruction must be separated from the Department and Registrar of Co-operative Societies, but must work hand-in-glove with them, as with all Departments. Under him are the village guides, the 'dogs' bodies' of the villages, one to every several villages, the handmaids and drudges of all Departments. If a villager wants good seed, a stud bull, a

* See p. 196.

vaccinator, or anything else, the village guide will get it for him. When any departmental man visits a village the village guide will know exactly what he wants to do and who wants to see him. The village guide is the last link in the departmental and propaganda chains who sees that everything reaches every village and on the return journey that all the villagers' needs and troubles reach the right department. If any other department or organization attempts to do or to supervise this work they will merely fail to do their own work. The village guide cannot be the servant of the panchayat as he deals with several villages; but he will help the panchayat and use the village hall as a centre—just as many others will. Moreover, a full staff of guides can be trained and appointed a few months after demobilization starts, but it will be many years before panchayats are in full working order all over the province. Village guides will want Tahsil and District Organizers all working under the Deputy Commissioner as the local representative of the Commissioner, Rural Reconstruction.

(vi) *Youth Movement.* (a) Compulsory training in village uplift for college students. Two or three weeks in each of the two years before taking a degree, before (in the lower hills) or after (in the plains), the autumn college term. The mornings would be spent in hard physical work—anti-erosion work, terracing and embanking of fields, bund building and tree planting, improving village roads, anti-malarial work, helping in improving villages, etc., etc.; the afternoons and evenings would be spent in handicrafts, hobbies, dramas, games and recreations, magic lanterns and cinemas, lectures and instruction on uplift, health and current affairs.

(b) Three months at a school of physical education,* after degree examination, or on leaving college; compulsory for all candidates for Government service and open to all others who wish to come. This would be more advanced than the earlier training. The course would include every aspect of welfare,

* Such as Walton Park in the Punjab or Saidapet in Madras.

uplift, hygiene, health, physical training, social service, citizenship, Scouting, and current affairs.

(c) District 'Folk' Schools, for rural school boys who do not go on to college; three months, in periods suitable to the farming routine, during the two or three years following the leaving of school. Those who join the civil or armed forces at a very early age might have to miss part or all of this course, but for the rest no lad would be accepted for Government service of any kind whatever who had not gone through the course. This course would stop the lapse into illiteracy, as one of its objects would be to encourage reading for recreation and instruction.

This course will be uplift of the most practical kind, how to make home, health, farm and village better. Games, handicrafts and hobbies would be taught. The lads would become handymen ready and able to turn their hands to any honest work, knowing the elements of disease control, hygiene, sanitation, soil conservation and reclamation, fruit and vegetable growing, farming, animal husbandry and everything else a country lad should be interested in.

The history, geography and affairs of their own district would be taught and they would be interested in current affairs of the province, of India, and the world. This of course sounds impossible for a three months' course but one hopes that post-war planning will include the making of rural education very much more suited to rural conditions and necessities so that the boys will be well advanced in all these subjects before they come to the Folk School.

The course would perhaps be a mixture of the famous Danish Folk Schools and the Continental and American Youth Camps.

(d) Boys' Clubs. A boys' club is a job for an ex-service man of the right type; he must get a small honorarium if he so desires and there must be tahsil, district, and divisional organizers under the Provincial Youth Organizers (see below). It will not be practicable to combine these with any of the above. They are quite distinct and any attempt to combine them with other

organizations will merely mean that the work will not be done.

(e) Administration. A Provincial Youth Committee, with a Provincial Youth Organizer as secretary, would control the Physical Training and Scouting College, organize and run all the various youth camps and have permanent training staff for them. In their spare time, if any, they would help the touring and inspecting staff of the Boys' Clubs which would also be a care of the Provincial Committee and Organizer. The Committee would contain representatives of the Education Department, the Co-operative Department, Panchayat Department, selected non-officials, and representatives of the Boy Scouts Association and of any other recognized youth organization.

In order to ensure that a very heavy bias in all youth training be given to 'uplift,' and for the better co-ordination of all training work, the Commissioner, Rural Reconstruction, would be the Vice-Chairman of the Youth Committee. The Chairman would be the Premier or another Minister.

The Committee would be allotted funds by Government and would also be allowed to appeal to the public for them, in order to pay for its staff, organize camps, make grants to approved organizations, etc.

(f) Legislation. Some sort of legislation will 'probably be necessary to enable Government to control and recognize youth organizations. Before they could wear uniform, parade in public, become eligible for grants of money, or appeal for funds, they would have to be registered, and their uniform approved (to prevent them copying each other's or Government uniforms); there would be rules about inspection and audit of accounts, their aims and objects (non-communal, non-political, etc.), their moral and educational principles and conduct.

(vii) *Government Servants.* All Government servants of all kinds, from patwari to doctor, engineer, policeman, civil servant, gazetted and non-gazetted, would receive training in either rural or urban uplift—according to where their future duties would lie—or in both. This would be organized by the Com-

missioner, Rural Reconstruction, in conjunction with the Youth Organizer and the Departments concerned. Much of it would be at the School of Physical Education, but the lower grades, such as patwaris and constables, would be trained in their districts while they were getting their departmental training. All departmental examinations would include 'uplift.' There would be a permanent uplift exhibition at the School of Physical Education.

I once suggested that the patwari (who in days of old did what uplift there was—reporting locusts and epidemics, etc.) should be modernized, specially trained, given better pay and prospects, and be used as the agent of uplift. The revenue pandits are horrified at the thought, but I still believe that 'consolidation' would make this possible, as it is less the time of the patwari that we want than his experience and his sympathetic and progressive attitude.

(viii) *Finance.* Government will have to find some money for all this work but the returns in peace and prosperity will repay it many times over. It will be possible, moreover, to supplement Government funds by local subscription. In addition to private subscriptions, towns and villages must be enabled to make community grants. Where there is a panchayat or a municipality or other local body this is easy, but for unadministered towns and villages an enabling Act will be required. If towns and villages according to their size and wealth paid, say, from Rs. 20 to Rs. 100 a year, a great deal of the cost of the movement would be found and the villages and towns would not feel it in the least, while the paying of money would arouse increasing interest and pride in the work. The Turks have a law by which every able-bodied man below 40 years of age has to give twelve days' work a year to his roads or pay for a substitute. Similar laws in India would enable a lot of community work to be done at very little cost.

(ix) *The Boy Scouts.* A provincial Boy Scouts Association is greatly handicapped by making its organizing secretary and

its chief training officer the same man. There should be two men at headquarters, one for running the association and one for training and inspecting. Both should be able to do either work and should do them by turns. Both should be able to train in the Indian languages of the districts and in English. They should both be ex-officers, and both should have special courses in England and India before taking over. They should have two assistants, one I.C.S. and one P.C.S., deputed for periods of one year, and not less than one year, each, to ensure that junior officers have a chance of this social service training. There must be several headquarters, training assistants and at least five divisional assistants, for camps at headquarters and in the districts, all recruited from the military of course.

An alternative method of recruiting the two secretaries would be five-year appointments on deputation from the Civil and Defence Services—all services being eligible, I.C.S., P.C.S., Police, Forest, Engineers, Doctors, Army, Navy, Air—wherever the necessary qualifications could be found.

In the districts there must be self-supporting District Boy Scout Associations. They must be enabled to collect village and town subscriptions as well as enrolling individual members.

Each Association will require a paid organizing secretary; he might also be the paid secretary of the Red Cross, Health League or any other such local associations. If the district organized a *Dehat Sudhar* Committee with branches for every activity such as Scouting, Red Cross, etc., this man might be the general secretary of the Committee and all its branches. He would, of course, be separate from the Deputy Commissioner's social service assistant.

In addition to the organizing secretary, each District Scout Association will require two headquarters' camp trainers and inspectors, and one trainer and inspector for each tahsil (large tahsils will soon require more).

(x) *Towns*. If the A. R. P. and Civic Guards can be converted to the purposes of peace there will be two ready-made

DISTRICT ORGANIZATION 193

organizations for urban uplift and perhaps for some help in village uplift as well.

Town uplift has hardly been touched yet, but the towns obviously require it even more than the villages. Each town will require its committee and its organizing secretary and there will be scope for an unlimited number and variety of clubs and societies and meetings of all kinds, for games, athletics, swimming, hiking, bicycling, debating, music, drama, radio, etc., etc. It will be advisable to keep town uplift quite separate from the *Dehat Sudhar* Committee and its activities, though naturally they will help each other whenever possible. It is also a mistake to try to organize village uplift from towns, and by townspeople. Townspeople should be encouraged to put their own towns right before they start patronizing the villages.

(xi) *Women*. The above notes apply to men only. The women have been so neglected that it is impossible to make joint plans either for a youth movement or for uplift.

(1) The Girl Guides movement must obviously be expanded as fast as efficiency allows.

(2) Infinitely more and better education for village girls, co-education in all village primary and lower middle schools with female as well as male teachers and with separate schools for middle and high classes.

(3) An immense development of domestic training of a simple kind suited to all ages, classes and standards of education, compulsory in all schools and colleges at all stages, and included in all diploma and degree courses. Besides this there must be provincial and district domestic training schools for adult women, as well as touring teams visiting and staying for several weeks in village after village, and holding classes. Even illiterate women must be given a chance of learning the elements of domestic work in their own villages. By domestic work is meant everything that will enable a house-wife to run a home and bring up children in health and happiness—*e.g.*, sewing, knitting, cutting out, making and mending clothes, cooking, food values, protective

foods, vitamins, hygiene, sanitation, first aid, disease prevention (including all about mosquitoes, flies, fleas, lice, rats, etc.), the feeding, psychology, training and welfare of children; household accounting, the use of simple medicines, home crafts, toy-making, and children's games, the making and using of such things as chimneys, hay-boxes, improved grates, ventilators, etc.

(4) The establishment of Co-operative Women's Institutes in every village should be our aim so that training may be continuous and not stop when the touring team leaves and the class stops, or the women return from the training school. These institutes would have a radio to receive a special women's programme at the most suitable time every day.

(5) The women must have their village guides just as the men propose to have theirs.

(6) Adequate medical and maternity arrangements are obvious but are at present almost completely neglected. These need not be enlarged upon now as they are part of a much greater thing than we are discussing here—that is to say, a women's welfare movement, but to complete the picture it is mentioned as no uplift movement can be complete which neglects this most important aspect of women's life.

CHAPTER XV

PUBLICITY

SOME people hate publicity and propaganda and think there is something rather indecent about them. The word 'propaganda' certainly has a bad name, but that is only because of its very value and importance. An old Roman once said that the better a thing was, the worse it became if it was misused, and so with publicity and propaganda. They are a form of mass education and are particularly suitable for adults and for people who are illiterate. In fact once people have passed the school-going age,

by far the best way of teaching them new things is by means of well-organized publicity.

Another fallacy is that publicity is unnecessary or that there can ever be enough of it. This springs from the fact that its results are not directly obvious. Well-organized publicity greatly increases the amount of work done by each rupee of Government money spent on rural reconstruction. The neglect of publicity is therefore a very short-sighted economy. Even good beer needs advertisement!

Publicity is the preparation for the attack. If you go to a village that has never before heard of, say, better seed or vaccination, you will have to spend your whole time explaining what they are. You will then have to go away and leave the people to talk it all over and to let the idea settle into their minds. If in the meantime no one else comes and talks about these things, your next visit may be similarly spent in explaining things and answering questions. Publicity will save all this waste of time and money. Where it is efficiently organized, when you come into a village and mention good seed, you are greeted with a chorus of, 'Good seed! Oh, yes, we have heard all about that!' You can then start straight away on your particular piece of work and in one tour do what you could not otherwise do in several tours. Nor can publicity ever stop. The moment you stop, people think the work has stopped and they stop too! The best-known manufacturers of boot-blackening, established for a century, had to wind their business up solely because they thought they were so well-known that they could save the money they were spending on advertisement!

Finally, publicity is a technical subject. It is one thing to have a message for the villager. To deliver that message effectively is quite another thing and the technique has to be specially learnt. All, therefore, who are trying to teach the villager new ways and to popularize new things should receive definite training in publicity methods and technique, and Government should organize its village publicity just as care-

fully and systematically as it does its other beneficent activities.

Publicity takes many forms:

- (i) Village guides (ii) Wireless broadcasting (iii) Magic lanterns and cinemas (iv) Dramas (v) Songs and glees (vi) Gramophone records (vii) The press (viii) District newspapers (ix) Coloured pictures and posters (x) Books (xi) Other printed material—leaflets, posters, handbills, and pamphlets (xii) Models and miniatures (xiii) Exhibitions, shows, *melas* (xiv) Competitions (xv) Public meetings and speeches (xvi) Demonstrations (xvii) Weeks (xviii) School propaganda (xix) Model villages.

Never forget that until the women are interested in rural reconstruction progress will be slow and uncertain. Particular attention must be paid to their special needs and to the amenities of their homes. In all forms of publicity, therefore, special attention must be given to the women, as otherwise they are sure to be forgotten and yet they are obviously more important than the men for everything concerning the home. The women must have special days or hours, special shows and performances. They will want special pictures, special books and special newspaper articles.

(i) *Village guides*.^{*} If money can be found village guides should be established, and if possible they should be men from the fighting services where all this work is now taught. Guides are selected for their enthusiasm and for their knowledge of one or more of the 'uplift' subjects. They are then given an intensive course of several months in every branch of rural reconstruction, they are taught the art of 'putting over' their message and they are taught where and how to get further help and information on each subject. They are equipped with as much publicity material as they can handle and sent forth as missionaries of the new village life. If they have to cover a large area, a bullock cart—panniers for hill tracks—will help to make them mobile. This however adds greatly to the

^{*} See p. 187.

expense and it is much better to have more guides than to provide transport. A keen guide will always manage to carry or to get his stuff carried round with him. The main equipment of a village guide should be his knowledge and his enthusiasm. The less they talk and the more they work with their own hands, the more they will achieve. They must be ready to help in digging a pit, cleaning a village, or weeding a field. No work is 'menial' to a village guide. And of course their own lives and the lives of their families must be models of what they are teaching. Guides must practise what they preach, their wives must be trained at a Domestic Training School, their sons and daughters must go to school, and their homes must be as perfect as they can be made.

The village guide will help every activity in his neighbourhood and the touring visitor from every department. He will rally his villagers to every show, demonstration or competition and take them to model farms or any other place where useful lessons can be learnt. In the evening he will turn on the radio and when the 'village hour' is finished, he will discuss what they have heard with the listeners. Village guides make the work of every department easier and more effective, and bring the message of the new village life right into every home in the most practical way possible.

(ii) *Wireless broadcasting.* All modern methods of publicity aim at multiplying to infinity the power of transmitting a message, and are therefore peculiarly suited to the Punjab, with its vast numbers, its scattered villages, its shortage of roads, newspapers, and other means of communication, its illiteracy and the peculiar difficulty of reaching the female half of the population; and the scarcity of trained teachers and instructors. Wireless and the cinema are perhaps the two best means of mass instruction yet devised. They appear to be expensive as they require a considerable outlay of capital and cost a fair sum to run, but their cost is very little indeed compared to their efficiency, the work they can do, and the size of the area they can cover.

We need not say much about the technical side of wireless. It has yet to be decided whether a few high-powered, or many low-powered stations are better for rural work. Perhaps both will be necessary. High-powered stations will send out a high class general programme as well as a rural programme. The low-powered stations will each deal with a dialect area and its special problems, but will relay what they want of the high-powered station programme. Really satisfactory receivers for village use have yet to be designed, and they are still far too expensive; the problems of running repairs and battery charging are also still to be solved. As technical knowledge and electrical power spread and the younger generation take more interest in these things and their fingers get more subtle, our difficulties will decrease. At present they are at a maximum.

The best kind of programme is now being worked out by trial and error. Long talks must be avoided, but the villager is not afraid of being told a great deal about crops and health and cattle and the many problems he has daily to solve. But the talks must be short, bright and in a language he understands. A lot can be done by song and drama and dialogue, and these he will listen to by the hour. All sorts of warnings, news, information, and, of course, market prices, must be provided, and if only a small area is being served by a station, local news items including meetings, police notices, and official tours can be broadcast.

It is possible that the best way to interest the village people is for the announcer to make the whole rural programme his own, and, instead of merely introducing each item, to weave them into his talk, commenting on each song and speaker and breaking into the items where necessary with question or comment to make them more intelligible and interesting to his listeners. When possible, the announcer should tour the villages where receivers are installed, so as to establish personal contact—personality counts nowhere more than in a village—to refresh his mind, to hear criticisms and to pick up ideas.

Government cannot possibly pay for a receiver and its upkeep in every village, as well as providing a programme, and neither can local bodies. The villagers themselves must help, and help they will as soon as they see the value of the service provided. The broadcasting of market news and market prices will very quickly make the people ready to contribute. Large land-owners, co-operative societies, panchayats, schools and other societies will soon get their own sets, and elsewhere, perhaps with the help of an enabling law, villages will agree to pay a small wireless rate. Government and local bodies and villagers all working together will soon find a way to finance wireless—once the villagers are convinced that it is worth having. Installing and servicing receiver sets and charging batteries will soon become a village industry.

(iii) *Magic lanterns and cinemas.*

(a) *Magic lanterns.* The magic lantern is still extremely useful, either by itself or combined with a cinema show; first a reel or two, then slides, then more moving pictures, and so on. The moving pictures help to collect and hold the audience. If no instructional films are available, entertainment films will do just as well. Slides are very easily made and coloured—coloured are far more effective—and with the help of a camera, a continuing series of fresh topical slides of local problems can be provided. The only difficulty of a magic lantern is that in villages it is invariably an after-dark affair and usually comes at the end of a long day. It is very well worth while, however, and the villager is quick to respond to those who take all that trouble on his behalf. Some of the illustrations in this book are taken from recently made slides and a very large selection is now available in the Punjab.*

(b) *Cinemas.* The first cost of these is rather high and good films are very hard to make. For the Punjab, at any rate until some better arrangement can be made, our best plan will perhaps be to hire a cameraman and stage the whole film ourselves. For

* See pp. 294-5.

teaching purposes, photography of actual scenes should be combined with cartoons. For instance, cartoons would make broad fun of those who farm badly or keep bad cattle, while good ploughing and the various breeds of good cattle would be shown by actual photographs. A good drama of village life with an 'uplift' thread skilfully woven into it would be invaluable both in the towns and in the villages, and some of the cost of making such films might be recovered by commercial bookings. Another form of drama is to follow the histories of two families, one which did, and one which did not, follow the teachings of the new life. To attract the people and entertain them between the instructional films, news reels and lighter stuff must be shown.

There is some doubt whether films should be standard size or sixteen millimetre. The latter cannot be enlarged, and will only serve a limited audience.* Standard size are useful for all occasions and can, if necessary, be reduced. Although standard size equipment and films are very much more expensive the running costs of a travelling cinema are much the same whichever size is used, and it is probably better to start with standard size. Time enough when touring cinemas are well established to try sub-standard outfits, travelling on mule back, or bullock-cart, for the outlying villages and hamlets.

Silent films are probably better than talkies. Even if talkies were not so expensive and so difficult to make, the dialect problem alone makes silent films more satisfactory. With the help of loud-speakers a clever well-trained running commentator—who by day is the lecturer and demonstrator—can adapt his style and language to every kind of audience he meets and make the silent film more lively than any 'sound band' can possibly make it.

A touring cinema should carry a magic lantern, an exhibition, samples of seeds, ploughs, ventilators, etc., plenty of posters and

* The newest kinds of 16 millimetre projectors, however, will enlarge to cover quite a large audience and it may be possible after the war to change over to the smaller and cheaper kind.

literature, and a keen and competent lecturer and demonstrator. The evening entertainment is followed next morning by an exhibition and a demonstration before the circus moves on to the next village. If local bodies, schools, co-operative societies, Red Cross, Boy Scouts, large landlords and every one else join together to organize and pay for a tour there is no reason why such a circus should not go on touring from village to village, six days a week and nine months a year. The shorter the marches between shows and the more continuous the programme the cheaper it works out. When people are making their plans for weddings and other ceremonies, why should they not apply for the travelling cinema and show (on payment of course), and include that in their festivities, together with a sports tournament to help to make things gay? To secure adequate publicity one of these cinema outfits is required for each tahsil.

(iv) *Dramas*. These are the most popular and in some ways the very best of all means of spreading the light. Villagers love drama and will sit and watch it all night; most people love acting and the village lad is a born actor. The trouble is that drama, to be good—and we do not want to flood the villages with rubbish nor to make schoolboy actors learn rubbish by heart—requires a good play and a good producer, and these are both very rare. Cinemas can be had to order, dramatics cannot! Drama also involves a great deal of time and labour and the most careful and skilled supervision.* It is usually the schoolmaster and his pupils who stage dramas—and the best schoolmaster and the best pupils at that. All this takes away from school time and means late nights for all concerned. Much, therefore, as the boys love the fun of going from village to village with their play, dramas must be kept strictly within bounds and used as a special treat for big occasions rather than as a routine means of publicity. If grown-ups from district headquarters or country towns will form an amateur dramatic club and help

* Could the puppet show be revived? It should be cheaper than ordinary drama, and, well-staged, should have a very great appeal.

the good work, so much the better. Professionals are best left out of it as they very rarely understand village ways and do not usually mix well with amateurs. A time limit should always be set, and the drama firmly closed down when it is reached. Otherwise the boy actors will not get enough sleep, and if the play is being staged in Fair Week, everyone oversleeps the next morning and the whole day's programme is late.

The cost of staging dramas is very small as very few properties are wanted if the play is really good in itself. The production of good plays requires special encouragement and organization.* Prizes must be offered, and when the dramas come in they must be scrutinized by experts and the best writers told what is wrong and how their dramas can be improved. Few people seem to realize that a drama requires very special skill and knowledge to put together, and that is why one sees so many very poor (and very long!) shows, held together only by the broad knock-about humour of one or two gifted amateur comedians in the cast. It is the same with acting and producing. If these could be regularly taught, a great improvement would soon be seen, as our schools and villages are full of latent talent which only wants training and developing to be very good indeed. An occasional teaching class, for the writing and production of rural drama, to which promising teachers could be sent, would be very useful. If a good teacher could be found he might be sent round to assist schools and clubs which want to stage dramas, first by helping them to choose a suitable play, then to allot and teach the parts, and finally to supervise the staging and rehearsals. The weak point of all rural dramas is preparation. Everything, including rehearsals, is left to the last in the firm conviction that everything will go right on the day. Improvization and gagging are relied on to see every play through, but it would go far better and be far more useful if it was prepared and rehearsed to the last detail and then put over with a snap on the big night.

* The Commissioner, Rural Reconstruction, Punjab, has a few selected dramas.

Another defect is length. All 'uplift' dramas are far too long and too diffuse and try to teach far too many lessons. Short plays—two on one night if you like with a different team of actors—and one lesson at a time are far the best from the teaching, and from every other, point of view. No play should ever exceed an hour and a half. If it is allowed to go rambling on hour after hour every one forgets what the point of the play was, even if it ever had one! Clear, simple, short plays, with few and simple properties, carefully rehearsed and prepared are what we want for publicity purposes.

Good dramas could probably be made largely self-supporting by playing to paying audiences in the towns in addition to the free rural shows.

(v) *Songs and glees*.^{*} These also are extremely popular and, if good, will be remembered and be sung as the villagers go to and from the wells and the fields. Here again the difficulty is to get good songs. Everybody thinks he can write and sing, whereas in reality good singers and composers are extremely rare. Unfortunately there is no such thing as a music master in our schools, and it is all left to chance. The lucky school with a natural singer, either pupil or teacher, will go ahead with its songs and glees, but even there the singer may be no poet! As with drama so with songs. Prizes must be offered and songs collected and printed, and schools should be forbidden to sing any songs that have not been passed by the district educational authorities. It is unfair to make children learn rubbish by heart, but they will be grateful all their lives for having committed good songs to memory from a good school song book.

In some districts, glee parties are formed at certain seasons of the year and go from village to village. These wandering minstrels sing their own compositions, and naturally one at least of a successful party is quite a good composer. All he wants is the material, so give him the detailed points of the 'uplift' programme which is being pushed at the time, and a

* See pp. 295-300.

small reward occasionally, to whet his whistle, and he will go round singing your stuff along with his own.

Competitions and festivals and *mushairas** for songs, glees and dialogues are a profitable way of entertaining people during fairs and shows. They spread the light, and encourage performers and composers.

(vi) *Gramophone records*. These are a great standby, and as long as the song and the tune and the singer are first-class there is no limit to their possibilities. Many double-sided records of uplift songs have already been made in the Punjab and more are to follow.† They can be on sale to all and sundry, be kept in schools, and be used to entertain crowds at *melas* or to collect audiences for meetings or exhibitions.

(vii) *The press*. One of the greatest obstacles to the progress of the work is the ignorance and indifference of the general public. The greatest possible use, therefore, should be made of the daily and weekly press whatever its political shade. Newspaper publicity is of two kinds:

(a) News items and short paragraphs. These are by far the best forms as long as they are kept as such and there is no attempt to add a moral or suggest official inspiration. By a news item is not meant a statement that a popular officer has been given a tea-party! That will not help. But if the public read that a Boy Scout dived into a river and pulled out a drowning woman and the Ambulance Section on the bank applied artificial respiration and brought her round, they will say to themselves 'Then they are some good after all.' Or, the prize at a certain dairy show was won by a co-operative cattle breeding society with a cow giving a daily yield of twenty seers. Or, the maternal mortality in a certain town has fallen from ten per cent to three per cent since the Health Centre was opened. The more of these items that appear, the better, and all workers must be encouraged to collect them and send them either direct to the press or to the Government publicity agency. In the

* Symposia of poets.

† See pp. 295-300.

latter case, no time need be spent in preparing them for publication. Notes, diaries, cartoons and pictures, snapshots with a note scribbled on the back, newspaper cuttings, stories, dialogues, poems, all are welcome.

(b) The second kind of newspaper publicity is the longer article. This is less valuable, but if not too long and signed either by an acknowledged expert or by someone who is known to be a good writer will certainly be read. The public love personalities, but long articles contributed by Government or by a Government department as such, unless exceptionally well written, are less likely to be read. Few Government servants with the necessary knowledge and keenness have the time to write and fewer have the skill. Experts, therefore, and good writers must be encouraged to write and in the public interest must be allowed to put their names to their work, even though this may involve the risk of a little self-advertisement.

(viii) *District newspapers* are a great problem. For the proper conduct of a local campaign of rural reconstruction a local weekly newspaper is an absolute necessity, and yet it is very difficult indeed to get one that is satisfactory and self-supporting.* To be self-supporting a newspaper must be really good, with up-to-date news and well-written articles of a general nature as well as attractively written uplift teaching. All this requires a highly trained staff, which is very costly and very hard to get. A newspaper that relies on schools and on a few rural gentry to buy it, not because it is worth reading but out of public spirit, will not last long and will never fulfil its purpose of spreading information. Advertisements will help the finances, but to get many and continuous advertisements, a big circulation is essential, and that will only come if the paper is worth buying on its actual merits. There is no rural reading public and this has to be built up, not by scurrility, obscenity or sedition, but by genuine reading matter of the best kind. Until a sufficiently

* See p. 182. The *Dekhat Sudhar* Committee is the proper organizer of the village newspaper.

large reading public is built up for separate papers to be issued for each subject and interest such as health, farming, children; domestic affairs, etc., the rural paper must have special stuff for everybody, boys and girls, soldiers and ex-soldiers, farmers, artisans, housewives, and every other kind of person. Local news and local information must be very complete—tour programmes, coming meetings, fairs, shows, and auctions. The local officers of all the departments must help to fill its columns. Everything that now goes to the tahsil 'for wide publicity' must go into the newspaper instead, and it must become the one place where the details of all coming events can be found. Full warnings and advice on all subjects of rural interest and importance must, of course, be there, and then the press of the world must be culled for articles of interest about sport, adventure, travel, heroism, royalty, science written simply, and general knowledge of all kinds from pearl-fishing to skyscrapers. In this way the ex-schoolboy, the ex-soldier and all those with inquisitive minds will be caught, in addition to those who require the contents of public importance, and a reading public will be slowly created.

If the newspaper world will produce a suitable 'farmers' weekly'—later on a daily will be wanted but a 'weekly' will be ample to start with—so much the better. It will at once get the patronage and encouragement of the schools and all the uplift agencies and societies. Until then we must struggle along as best we can with our present newspapers. A lot of help could be given to district newspapers by sending the centre pages ready printed from provincial headquarters, on the lines of the English parish magazine. These centre pages would contain all the news, provincial, Indian, and world, in addition to well-written articles of every kind, uplift, general knowledge, humour and everything else. It would be a complete newspaper, and all the district would do would be to add the cover and title with its own special items on the insides of the covers or on any other pages it wished to insert. To make this a success all district newspapers that joined in would have to be of the same size and shape and

publish on the same day. If the trade does not come to our help soon this will be far the best and cheapest way of providing district newspapers, as the present system, by which subsidized newspapers of varying merit appear and disappear, is far from satisfactory.

An alternative to this would be to send budgets of news and articles from provincial headquarters for district newspapers to select from and print. This would be far more expensive as it would mean separate printing in every district.

Anyway, whatever form it takes, a village newspaper is absolutely necessary for the efficient running of a district and for the spread of the 'uplift' programme. Information takes weeks and months now to reach remote villages, and we cannot hope to get a real 'movement' going until that time-lag can be reduced to not more than a week at the outside.

(ix) *Coloured pictures and posters.* Business firms do not spend large sums on coloured advertisements for nothing. Coloured pictures attract every one and should be widely used for our campaign. There are two kinds:

(a) *The wall picture,** which should be a beautiful piece of art to hang inside a home or school. There is a big demand for them now in villages where the light and air campaign has brought daylight into the homes. Previously the only patch of wall that seemed bare was that opposite the door, and that was invariably decorated. Now all the walls look bare, and everywhere I go I see efforts being made to decorate them with pictures, advertisements, calendars, coloured paper, coloured clay ornaments, polished utensils, and so on.

Although money would be wanted at the start, the picture industry would soon be largely self-supporting as there is a genuine demand for bright pictures in all village homes which have let in the light. Production would naturally have to be on a scale which would admit of low prices, and wide publicity would be wanted to promote quick sales. If local bodies and

* See pp. 26, 45.

institutions and co-operative societies used them freely to adorn the walls of schools, hospitals, halls, offices, etc., and they were distributed as part of prizes and rewards they would soon begin to be known. It is the housewife who will buy them, and it is to her notice that they must be brought.

What a chance for bright and pretty pictures—the housewife is very tasteful, so please do not insult her with nasty, tawdry stuff! We want good pictures of home and village scenes suggesting—nothing more—the new village life. Good pictures are very hard to get, as good painters do not seem to know either our Punjab villages or our uplift programme, and those who do know the villages cannot paint! This difficulty, however, can easily be overcome by the offer of good prizes for the kind of picture we want.

(b) *Posters.* These are wanted for verandas and for other protected outside wall spaces. Many of them will, of course, find their way into cottage homes, but their main use will be to adorn the walls of schools, hospitals, post offices, railway stations, offices, notice-boards, and all other such places where the public daily come or pass by. Their meaning must be immediately obvious to the eye of passers-by and they must be intelligible even to those who cannot read. They must be bright and, of course, beautiful. Here again the offer of prizes will soon bring us what we want.

Both these kinds of publicity cost money, but are well worth it. They serve a double purpose, popularizing the better homes movement and brightening the places where they are hung.

There is no reason why we should not get help here from firms which want to advertise their goods in the villages. Many calendars and advertisements have bright and pretty pictures on them, and I dare say plenty of firms would be glad to use a picture we suggested as long as it was attractive enough for their purpose, and if it is not good enough for an advertising firm, it is not good enough for our business either!

The common faults of posters are that, instead of advertising



A WELFARE WORKER AND HER CLASS

In the foreground is the frame for making the woven strips used for beds and other purposes. (See p. 133)

CO-EDUCATION IN A VILLAGE SCHOOL

Note the sewing machine. (See p. 127).





CO-OPERATION IN ROAD-IMPROVING

The village road is straight because fields have been consolidated.
(See p. 155)

THEY ARE HAPPY—BUT
bricks should be carried in wheelbarrows.



the new good thing they intend to, they advertise the department which designed them, or else they rely on a lot of print—and small print at that—to explain their object. The name of the department and any instructions we wish to give can come in a corner of the sheet, but the fewer explanations the better. The picture must explain itself, and 'itself' must be the general lesson we wish to teach and nothing else.

Posters are too expensive for such exposed places as outside walls. For them the best thing is probably the slogans which are already so common on village walls, and every department should invite the schools and whoever else writes them up to make as much use as is reasonably possible of any of their walls which are conspicuous to the public.*

(x) *Books.*† As for books, there is no reading public at present and so they are very rarely of much use unless they are good enough and important enough for schools, teachers, Government officers, missionaries and the army.

(xi) *Other printed material.*‡ In the illiterate state of our villages, printed stuff has only a limited value, but as we cannot visit every village every day, it is essential to print handbills and notices and occasionally leaflets and pamphlets, so that those who can read may know the exact details of what we are teaching and pass them on to their neighbours. It is most distressing to see the woeful ignorance displayed by so many workers, official and non-official, of the exact details of each of the many simple reforms Government is seeking to bring about in living and farming, and anything which will increase the knowledge and therefore the value of those whose duties bring them in touch with rural people is all to the good.

There are in the Punjab 35,000 villages, 9,000 patwaris and nearly 10,000 schools, 25,000 teachers, doctors and compounders, 25,000 co-operative societies, and several thousand zaildars and inamdars, to say nothing of thousands of post offices, railway stations, courts and offices frequented by the rural public. That,

* See p. 217 (xviii).

† See pp. 291-3.

‡ See pp. 290-1.

with spares for replacement, meetings and shows, means that we want at least 150,000 for each issue of each simple handbill or notice that is of general application. Fortunately, vernacular printing is very cheap and it would obviously be extremely useful if every one of the above-mentioned people and places had at least one copy of the simple instructions for each item of our village programme as they are issued.

There is also a demand for a fair quantity of stuff printed in English to explain things to inquirers, for the army and for the press, and to save endless talking and writing.

Care and ingenuity is required in organizing the distribution of printed publicity material. Otherwise little value will be got for it. The first issue to individuals, offices and institutions must be so arranged that there are no omissions. Spare copies for distribution and to replace casualties are wanted, as well as 'repeats' at reasonable intervals. Batches of materials are required for fairs, and all kinds of meetings. At such places as post offices, railway booking halls, and offices, they should if possible be strung up in batches for people to 'please take one'. Here, of course, replacements must be arranged. Then there are innumerable places, such as markets, roadside halts, *sarais*, churches, and other religious meeting-places, where, by arrangement, our notices can probably be posted in sheltered spots. Replacements here require particular attention,

Rural reconstruction should have a universal application and a universal appeal, and the details of how the people can improve their ways of living should be universally known. The efficient distribution of literature, the extension of its scope and the improvement of its organization, therefore, is a problem demanding continuous attention from all persons and organizations concerned with rural reconstruction.*

(xii) *Models and miniatures.*† People like seeing things in the

* The Officers' Board and the *Dahat Sudhar* Committee are particularly responsible for this work. See pp. 178-9.

† See pp. 300-1.

round, and it is much more easy to teach people how to fix a ventilator or how to put a well right with the help of an actual model than by any amount of talking. Wherever possible, therefore, actual models of the things recommended should be made, both for permanent exhibition in some central place and for touring officers and rural shows. With a little ingenuity they can be made light and portable.* Three-ply or five-ply wood is extremely useful here and the miniature good and bad villages used in the Punjab with their little dolls and toys to represent people and cattle, trees, flowers and village equipment, always draw large crowds. The Army makes great use of them too.

(xiii) *Exhibitions, shows, melas*

(xiv) *Competitions*

(xv) *Public meetings and speeches.*†

These we may take together. All forms of public demonstration are valuable propaganda. Villagers like coming to these gatherings, particularly if there is a sports programme to attract them—wrestling, tent-pegging, athletics, *kabaddi*, *pirkaudi*, football and other games—or if there is any hope of a drama or a cinema or even a singing party. If the great ones of the district or from outside attend, the villager is still further pleased, and the greater the occasion becomes, the more important he thinks the object must be for which the gathering is organized. These meetings must be held as far as possible in the villages themselves for the convenience of the villagers rather than in a big town or at district headquarters. Many small village shows are better than

* See pp. 300-1.

† Rural reconstruction is now so important that press correspondents and news agents often attend meetings and sometimes publish very garbled accounts of the speech. It is advisable, therefore, for the principal speakers to write short notes of what they are going to say and hand them over to the press agents at or before the meeting. These notes should not attempt to give a resumé of the whole speech as that would be too long for publication and will result in either a further resumé being made or in extracts being selected by the press for publication. In either case the reader will have little idea of what the speaker said or meant. The best way is to put down a simple and concise description of one or two of the most important lessons which the speaker wishes the public to learn and to leave out all the rest.

a few big headquarters shows, although these, too, have their value if the prizes and entertainment offered are sufficient to attract more than just the local people and live-stock.

(a) *Big fairs.* The lay-out of a fair should be so arranged that the crowd, while going to and from the popular shows—sports, stock judging and so on—have to pass through the exhibition of seeds, ploughs, health, good and bad cattle, etc.* If the exhibition is put away in a corner, very few people will see it. The exhibition should be in two parts, a popular general show of all the important items of the 'uplift' programme which are being taught at the moment, and a technical exhibition of the more advanced stuff for those who are interested. If the two are mixed up, the general public crowding in will make it impossible for the technical staff to deal with advanced inquirers, and the attention of the public themselves will be diverted to stuff which is too advanced for them, and they will neglect or forget the simple lessons they ought to learn from the popular side. The popular side can be demonstrated by Scouts, and schoolmasters, trained and supervised by the departmental staff, which would thus be left free to explain the more advanced exhibits. The exhibition must be well advertised and well displayed. Big flaming posters and banners, gramophones and glee singers are all fair means of attracting the crowd.

The language of the locality and the needs of the locality must be the sole consideration of the organizers of the fairs, and any tendency to play up to important visitors and neglect the local people must be rigorously banned.

In a similar way the time-table of events must be very carefully arranged. You do not want a big climax on the last day with crowds so big and unwieldy that they can learn nothing. Steady crowds every day are what is required, just large enough to keep the demonstrators busy all the time—remember to have relays of demonstrators as no one can shout and talk for hours on end even for half a day. The popular events, therefore, like games and

tent-pegging, must be dotted about in the programme so that each day there is a special attraction. As soon as the sports are over the crowds stream away home. They must therefore be put not before but just after the important instructional event of the day, such as cattle judging or ploughing matches, so that while people are collecting and waiting for the sports they cannot help seeing and hearing something useful. Parades of winning stock must be held during intervals of games and sports so that all may see the good beasts and applaud the breeders. The important cattle prizes are always far too small, so make the most of them. They must not be given in a hole-and-corner way, but in full durbar, and every honour must be given to the successful owners. One long dreary prize-giving must be avoided. Give the smaller prizes the moment the judging is over and hold a short durbar every day or on several days for the bigger prizes. These durbars can be 'featured' with songs, speeches and other attractions, and the great man who gives away the prizes can be different every day. Don't collect your great ones all on one day. One big visitor is quite enough for each day. Spread them out over your show so as to make the best use of them. To the great ones I would suggest that before going round the fair they should ask the organizers what are the principal lessons the fair is intended to teach and then take an obvious interest in those exhibits which try to teach them. Don't spend half an hour discussing American cotton at a fair on the top of the Salt Range!

It is no use waiting nine or ten months and then relying on your memory of last year's fair for improving your next year's fair. Each day of the fair, keep a careful note of the mistakes made and improvements suggested, and immediately after the fair is over, draw up your plans for next year. In this way only will you make it better each year.

(b) *One-day shows.** One-day shows in all important villages

are extremely useful, and they should be held all over the district, carefully spaced out so that every village can attend one fair and get its cattle there and back without spending a night on the road. If this is done even small prizes will attract exhibitors, and for the grading up of cattle and the general encouragement of better farming and everything else these small fairs are of very great value indeed. They wake up the countryside and bring it home to all and sundry that Government is out to help, and they teach the simple ways in which people can help themselves.

The programme is simple—a small exhibition of good and bad cattle collected from the neighbourhood, simple health, agricultural and other uplift shows, stock and crop classes for small prizes. Then games and sports, a few speeches followed by the prize-giving,* with a cinema, magic lantern, and wireless programme to end the day. The cheapest way of organizing these shows is to make up a small circus and send it from centre to centre in charge of some one who can demonstrate the simple items of each departmental programme—there is nothing complicated about this sort of show, only just the actual seeds, cattle, methods, etc., which you want the people in that particular locality to see and try. The local departmental officers keep an eye on these shows and turn up from time to time, but with one expert in charge, local helpers from the schools and villages, and a trained man for the lantern, cinema, and wireless, a very successful series of small shows can be run costing only from Rs. 100-200 each. A special effort should of course be made to turn the village where the show is held into a model so that it too may be part of the uplift demonstration.

Existing *melas*, religious and other, should be made full use of. Stage the circus as one of the side-shows, put up posters, distribute handbills, send round singing parties with banners and all the usual outfit. The same programme will do as for village

* Don't give the prizes before the speeches or you will lose most of your audience!

shows except that no money or trouble need be spent on games and sports to collect the crowd as that has already been done for you.

Competitions. Prizes and cups for the best zail, best village, best *pakka* house and best *kachcha* house will produce very keen competition. The marking system should always be published in advance. The first year it will be very simple indeed—say, pits, ventilators and well-tops—but as it develops, every item of the programme can be included until marks are given for sending girls to school, for flowers and sewing-machines in village homes, for stud bulls, cotton sown in lines, and every detail of the programme.

Judging is long and difficult, but it is very well worth while. Carloads of judges go from village to village eliminating and eliminating until a few of the very best are left for the inspection of the final judges. To make things a bit easier, the putting in order of the road connecting the village with the nearest trunk road should be made an obligatory part of the competition. If possible, secure ladies to do the judging of the homes and of the village itself. The villagers appreciate this very much and it enables the village women to profit by the competition.

Prizes for seeds and crops are useful, but as far as possible insist on whole plants being shown, both for demonstration purposes—a five-foot wheat plant with a score of tillers is far more impressive than a saucer full of seed—and to ensure that they are home-grown and not bought.

Athletic sports and village games are a most important and popular item of the rural programme, both for their own sake and for the fillip they give to all the rest of the work. They are best encouraged by organizing tournaments. These should be developed until first comes the zail, then the tahsil and finally the district or Olympic tournament. As soon as possible registration of village games clubs should be made a condition of entry so that the organization of games may be steadily improved.

(a) *Ploughing matches.* For ploughing matches, mark out the ground very carefully beforehand and settle how marks shall be given. The main thing is that a properly turned, pulverized and level bed should be left by the plough, and the principal marks must be given for this. Great speed is not of importance; it must not be so great that it would tire the bullocks before their daily job is done or so slow that the work would take too long to finish. Cruelty, roughness and failure of the ploughman to control either himself or his team must be marked down. A common fault in judging is to expect ploughmen to plough right up to the edge of the field and drive their oxen over the field bank. This is quite wrong. Field banks are crumbled and washed away and blown away quite enough already without being trampled down by bullocks at every ploughing or harrowing. The furrow-turning plough should come out of the ground just before the front feet of the oxen reach the field bank, and the strips or 'headlands' between the plough and the bank at each end should be ploughed across when the field is finished. Headlands are important and it is essential to teach the difference between the working of a furrow-turning plough and the *desi hal*.* The furrow-turner must come out of the ground at the corners and not be driven round in the ground like the *desi hal*; otherwise the land will be left all lumpy and uneven at the ends and corners.

Spectators require careful controlling or they will overrun the field and interfere with the cattle and ploughmen and trample on the ploughed land and so spoil the competition. They must be kept well beyond the farthest point reached by the bullocks in turning. Be sure and collect the people before ploughing starts, by beat of drum and by singing parties and other devices, so that as big a crowd as possible shall see and take an interest in the match.

The strips of land for each ploughman must be sufficiently separated for the cattle not to interfere with each other. If two heats

Indigenous wooden plough with iron point.

can be ploughed in the same field, use alternate strips each time. Ploughmen must have large cloth numbers on their backs so that they can be identified from any part of the field by the judges, and the judges need not know their names. Get impartial judges from outside if you possibly can and keep everybody, including stewards, committee members and departmental officials well away from the judges, or you will soon have grumbling, and complaints of bias and unfairness! Your farmer will not stand for what he thinks is hanky-panky!

(xvi) *Demonstrations.* Demonstration farms belonging either to private individuals or to village associations are now getting quite common in the Jullundur Division, but are rare elsewhere. These are perhaps more convincing than Government farms, as no one believes that a Government farm is run on business lines and without extra canal water and other advantages. Demonstration plots are organized all over the province by the Agricultural Department, in which the cultivator agrees to farm a certain plot in exact accordance with the instructions of the department. These and the demonstration farms should be visited by schools and by touring officials whenever possible, so that the village people may realize their value and importance and the best use may thus be made of them.

(xvii) *Weeks.* Health weeks, rat weeks, and so on are good if they are really well organized, but if they are slackly run they are worse than useless. As the district staff has to organize them it is probably better to have a different week in each tahsil for the special effort, so that the district staff can tour in tahsil after tahsil instead of having to dissipate their efforts over the whole district for one single week.

As soon as possible, Health Week must become the six-monthly 'spring' cleaning, and one day a week must be agreed upon for the maintaining of a high standard of cleanliness in the village.*

(xviii) *School propaganda.* Schools are great advertisers within and without their buildings. This sort of work teaches the

* See p. 251.

children social service, and in writing up the fresh slogans and designing the new posters they must study their subject-matter. It is suggested that the school should stick to one item of the rural programme at a time, taking each thing in its season, and flood the neighbourhood with it, on the lines of the 'weeks' which are so popular nowadays. For instance, during cotton sowing time, the schools for a whole month would broadcast 'sow cotton in lines', in every way they could, by song, slogan, poster and procession. When cotton sowing was over the slogans and posters would be wiped out or removed and replaced by whatever had to be done next in that locality.

There is no doubt that far more use should be made of high schools and colleges for teaching the simple things that every Punjabi, whether townsman or villager, should know for his health and welfare.* Rural reconstruction is the art of living in a village. There is an unreasonable objection, however, on the part of some educationists to the inclusion of the simple rules of hygiene and better living in 'higher' education. For some unexplained reason better living is not a 'cultural' subject. What forsooth is the difference between culture and better living? Can a poor country afford to omit from its educational system the simple knowledge of how to improve the health, wealth, peace, happiness, and general well-being of the people? Cleanliness and clean habits are the beginning of both education and 'uplift'; so why should the educationist refuse to descend to the detailed pursuit of cleanliness! Cleanliness is by no means an automatic accompaniment of education! Yet is not the absence of cleanliness the negation of true culture and education, and can there be cleanliness without teaching the young the exact details of how to achieve it?

(xix) *Model villages*. There is not much to be said for model villages. They absorb the time of the departments, no one goes and looks at them, or if they do they immediately say that special money and special staff were concentrated on them and therefore

* See p. 10.

that until Government will do the same for their village nothing can be done—and so on and so forth. Meanwhile, while the model village is being prepared, the rest of the district heaves a sigh of relief, prays that its turn may never come, and does nothing. The model village may develop unexpected difficulties and obstinacies and never become a model, or by the time it is ready the promoters may have moved on and interest has been lost. If model villages are prepared, work should only be concentrated on them for a few months. The workers should then move on to another set of villages, keeping an eye on the previous models to prevent them backsliding.

(xx) *Conclusion: a general attack.* The best way to proceed is to attack the whole district, so that no one can sit idle and watch other people being reformed. One thing will take on in one village and another thing in another. Exploit the successes and use each success both to lead to other successes in the same village and to shame other villages to do likewise. In this way practical experience and knowledge of the carrying out of each reform, of what it looks like when carried out, and what it leads to will be obtained somewhere or other in the district, news of it will spread, and other villages will copy it. It will be a very long time before every reform can be seen in working order in one village, but there is no reason why every reform should not quickly be seen in some village. Nothing succeeds like success, and the contagion will spread if everybody is put on the defensive and kept busy by a general and vigorous attempt to raise the whole standard of living and farming throughout the district.

The whole district programme is a big demonstration of what better farming and better villages should look like, and it must be maintained and developed until the people learn, and are organized, to do it themselves on their own and for their own sakes. This will come about when all this business becomes the common knowledge of every man, woman and child in the village, when in every village there are organizations to administer the village and every villager is a member of one or more co-operative

societies for his production, marketing, finance and everything else, when every village housewife belongs to a co-operative Women's Institute to learn and practise thrift and homecraft.

Till then everything in this chapter must go on at full pressure, and even afterwards it will go on, as there will never come a day when we can sit back and say there is nothing more to teach the village, and nothing more to learn, to make home and farm and village brighter, happier, healthier and more prosperous!

CHAPTER XVI

RURAL FINANCE

EVERY farmer requires capital. In the county of Norfolk in England, it is reckoned that £10 of capital per acre are necessary to farm properly. Far less is wanted in the Punjab, but even so, far too little capital goes into the land of the Punjab. And yet the farmer is sunk to the eyes in debt. Alas, he borrowed, not to develop his land but for domestic and social, that is, for unproductive, purposes.

It is a common thing to run down moneylenders and say that they are a curse, and what not else. But although the necessity for credit has been exaggerated, there are times when the farmer needs it and needs it badly. A rural credit organization there must be, and hitherto it has been principally provided by the moneylender. But moneylending methods and rural finance generally, just like farming methods, are out of date and require modernizing.

The ideal method of financing and organizing smallholders, and villagers generally, is the co-operative system; and that requires steadily developing until every farmer buys, sells, and when necessary borrows, through his co-operative society.

1. The present system. The main defects of the present system of village finance are:

- (i) The moneylender lends largely for unproductive purposes

instead of confining his business strictly to financing agriculture and developing the countryside. During the boom years, when his capital was rapidly increasing, he debauched the cultivator with loans for any and all purposes, instead of developing rural industries with the capital not wanted for the land.

(ii) Moneylending tends to become mixed up with personalities and parties, and there is already far too much feud and faction in the Punjab village.

(iii) The accounts are kept in what is to all intents and purposes a cipher code.

(iv) The borrower is tempted to borrow for all purposes, whereas borrowing should be confined to productive purposes, farming and land development, and to other absolute necessities. Domestic and social needs should be met not by borrowing, but from slowly accumulated savings. In all prosperous countries, saving and thrift are the mainstays of home life, indeed these are some of the main causes of their prosperity, and so they must be in the Punjab.

Not an anna more must be spent on such domestic events as a wedding or a funeral than has been saved up for the purpose. Once borrowing starts, there is no limit, and a social ceremony, instead of being looked forward to and saved for and then thoroughly enjoyed as the reward of thrift, is looked back to as the beginning of a family's ruin. Savings are the only possible mainstay of a high standard of living.

(v) Moneylending is expensive. Each individual firm is quite small, and as the business is done with so little discrimination the rates of nominal interest have to be high. As a result of these high rates repayments are very irregular and there is far too much appeal to the law courts.

(vi) The villager buys everything on credit and runs an account from harvest to harvest. When people have to pay cash they look on both sides of every rupee, and think twice before they buy at all; but no one bothers about the price of anything if it is merely written up against him. The villager buys and borrows from the

same shop and sells his crops there. This mixture of money-lending and shopkeeping is fatal for the borrower and buyer. Running accounts often mean lifelong debt.

The villager must learn to keep money and to pay cash for everything except the genuine financing of his industry or whatever else it may be by which he earns his livelihood! * The farmer's wife must pay cash too. Her present custom of barter is terribly wasteful. The handful of cotton or grain which she exchanges for her daily needs is neither weighed nor priced and she gets less than half its value for her bargain. Once she can read and write and keep accounts—but not till then—she will hold the family purse, † as in other countries of small-holding cultivators, and then and then only will our villager's finance be sound.

Without either insurances, a savings bank or a co-operative bank account, the Punjab farmer is nowhere. ‡ If you ask him to save, he says he will do so when he has money to spare! The opposite is the truth. Until he saves he will never have money to spare, and until he opens an account, he will not begin to save.

Saving is a matter of habit and training, not of wealth. Familiarity with the savings bank and with the routine of saving should be taught in every school, college, Boy Scout troop and army unit, until it becomes second nature. Without an account already open, a desire to save and a pride in saving, no surplus is possible, and no increase in prices or crops leaves a villager permanently better off than before.

* But for the ease with which laws are evaded, one is tempted to suggest that credit accounts should be outlawed, and that no suit should lie for a running account!

† See pp. 121, 126.

‡ While revising this chapter, I was called to a village fire and found the produce of sixty acres of good wheat in flames—the food supply of a dozen families! We talk in England about saving for a rainy day. In the Punjab there are a dozen calamities to save for, hail, fire, floods, drought, plague, locusts and other insects and pests innumerable.

(vii) Debt is a most insidious and demoralizing thing. Debt-ridden people cannot raise their standard of living. Debt is no incentive to hard work or to better farming. On the contrary it is the direct opposite, as the debt-ridden man knows that all the results of any improvement he makes will go not to himself but to his creditors. Once a man is in debt, he sees no chance of recovery, hope leaves him, all desire for improvement disappears, he goes on borrowing more and more, and that is the end of him as a progressive independent self-respecting and self-supporting citizen.

It is often complained that the villager's credit must not be reduced. No, not for genuine productive purposes perhaps, but it would be a grand thing if his credit for unproductive purposes could be reduced to *nil*, and if he could be prevented from borrowing from more than one source. The villager is always making the excuse that he cannot cut down his expenses, as he is compelled by custom to spend a certain sum on family ceremonies. What a blessing it would be if he was unable to borrow an anna. What a premium it would put on thrift and saving!

Even for productive purposes a definite limit to credit would be no bad thing, but legislative interference is of little use as such laws are too easy to evade when both parties to the loan want to evade them. What can be done with people who seem so incapable of looking after themselves? Self-discipline, rather than unlimited credit, is the villagers' first and greatest need!

2. The future. Village finance requires a complete overhaul. The following are essential elements of any system of finance for smallholders, but the first and biggest essential of permanent release from debt is character—strict integrity and a capacity for self-denial, self-sacrifice, hard work, self-help, and mutual help.

(i) Co-operative finance for farming and land development and for such stark necessities as medical aid and education. No borrowing except from the co-operative society.

(ii) Cash payments for everything else.

(iii) Thrift and saving up for all purposes, and particularly for social and domestic expenditure, which must be financed solely from savings.

(iv) No debt. We must go back to the 'poor but honest' ideal, where debt is almost a sin and the debtless man is proud and independent.

(v) The housewife must hold the purse, and give up barter entirely for her daily needs.*

(vi) Accounts must be kept in the common script of the countryside and not in a cipher code.

(vii) A system of banking which will enable the farmer to sell his crop in the *mandi*,† the pensioner‡ to draw his pension and the lambardar to pay his land revenue and canal dues, without being obliged to carry bags of money up and down the country.

(viii) By means of saving and banking the farmer must become so reasonably independent and solvent that his next meal is never in danger and one flood or hailstorm cannot reduce him to starvation.

3. Old debts. So much for the future. What about past debts? Several things are obvious.

(i) At present prices and with debts at their present nominal totals the average zemindar, whether landlord or tenant, is technically bankrupt; that is to say, he cannot possibly meet his liabilities in full.

(ii) He must be kept on the land.

(iii) He must be able to live a reasonable life and bring up his family, and he cannot live for ever on a minimum subsistence as a perpetual debt-paying serf. This is bad for the farm, the farmer and the capitalist. There must be a possible end of debt, within a reasonable time, for the farmer who works hard and well.

* See p. 121.

† Market.

‡ Pensioners have often told me how quickly the cash pension payment burns a hole in their pockets!

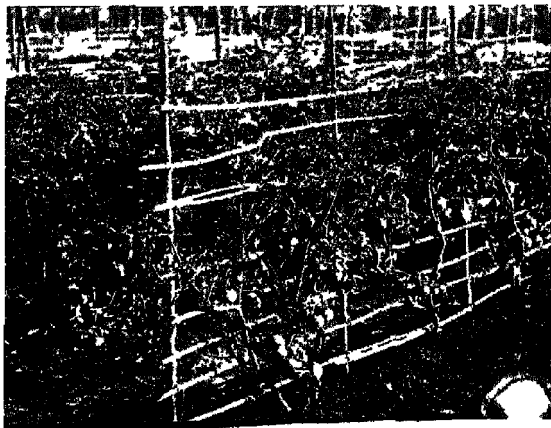


A FIRST CLASS CROP

with the help of rain-water only It has been regularly
and the crust of the earth has been broken after every
shower of rain (See p 275)

TOMATOES

xcellent food, and a profitable crop (See p 237)





WASHING THE SHEEP

SHEARING OF SHEEP AND WOOL CLEANING. (See p. 238)



(iv) The farmer must even have some ambition for a higher standard of living, which by thrift and hard work he may have a reasonable chance of achieving and maintaining.

(v) Credit and capital are necessary to the business of farming, and even if the moneylender disappeared, he would have to be replaced by an equally efficient organization. As a matter of fact he is unlikely to disappear as he has a shop as well as a bank.

Another possibility would be amalgamations of rural moneylenders operating over wider areas at lower rates of interest, but this is equally unlikely to come about.

(vi) Most creditors do not desire a final settlement of their debts, but only some arrangement which will enable them to restart business. Those who wish to withdraw from the business are already settling up as best they can and moving into the towns.

(vii) By far the greater proportion of all rural debts were contracted for unproductive purposes and not for the genuine necessities of living and farming. Instead of looking round for new means of using his capital, such as the development of rural industries, the moneylender, during the times of high prices, encouraged the borrower in luxuries and extravagances so that his expanding capital might find investment. The lender lent with his eyes open, and of his own free will. Some accommodation between the two parties therefore cannot be described as confiscation, as debts not incurred for necessity are obviously entitled to less consideration than those which are, and the writing down of capital is a normal procedure all over the world during times of depression.

(viii) The pre-War crisis, although not immediately due to any fault of the creditors and debtors, was ultimately due to bad lending and bad borrowing, and was bound to come the moment the period of high prices after the Great War came to an end. Even if the boom had continued, nothing could have prevented a crash sooner or later except the education of the people in principles of

thrift, better farming, better living and better business: and a boom is a bad time to begin teaching such things.

(ix) All this capital came out of the land, is part of the land and part of the system of Punjab rural life, and cannot be thought of otherwise. If agriculture slumps, capital must slump, and the capitalist has no more right in slump times to claim repayment of capital at boom rates than the farmer has to sell a bumper crop at the high rate he paid for seed.

(x) At present prices, the old rates of interest are too high and the old terms of business require revision. Creditors and debtors, however, where they have not been stirred to passion, are perfectly friendly, and anxious to live and let live, and to come to such terms with each other as will enable both of them to continue business in the changed conditions of today.

The law court is not the ideal place in which debtor and creditor can come cheaply and amicably to terms. Any settlement that is made will be best made elsewhere and is being successfully accomplished by the new, but so far experimental, Conciliation Boards.

(xi) The agriculturist has forfeited much sympathy by his thriftless ways and bad methods of farming. When he received special treatment, as in the Alienation of Land Act, he should have made it a point of honour to work hard, to be thrifty and careful, to use his brains to learn better methods and so to get the best out of the land and thereby to justify the granting to him of such favours. This he never did; not only has he never as a class tried to improve his ways, but till recently he was often apathetic to the efforts of Government to make him try out new methods of farming, living and doing business. If therefore he is helped now, he must agree to open his mind, accept advice and consent to learn the gospel of thrift, wise saving, and wise spending, and to practise better farming, better living, and better marketing. Otherwise we are wasting our time trying to help him, as he will only be in a worse mess again in a few years' time.

The debtors have no real desire to become and to remain free of debt,* and if their debts were all removed today, they would begin getting into debt again the first thing tomorrow morning! At the same time there is a vague stirring within the zemindars which in time, particularly if they are well taught and well led, will bring them to desire to get rid of debt in order to raise their standard of living and to become economically independent. This the capitalist must encourage and adapt himself to, as economic independence is quite compatible with sound banking; in fact sound banking is impossible without economically independent borrowers.

If we can solve the present problem and restart rural life, provided that the proper education of the people is immediately and thoroughly taken in hand, the crisis will have been a blessing in disguise, and we shall lay the foundations of a far sounder and safer edifice of rural prosperity.

Just as the law can neither make people sober nor righteous, so it cannot make them either thrifty or permanently debt-free. It is no use, therefore, hoping for the impossible from legislation.

The best the law can hope to do is to help those who want to help themselves. Whatever law, therefore, is passed, the need for education in its widest sense will remain in order that the people, both capitalist and agriculturist, may learn the proper use of capital and may learn to work together and to use their capital, their brains and their labour to develop the countryside and get the best out of the land, instead of wasting all their resources in futile struggles with each other.

For the liquidation of past debts, in the Punjab as elsewhere in the world, the two parties must be invited and encouraged to come together and make a settlement that will enable both of them to continue business on satisfactory terms with renewed confidence and mutual respect, Government providing any legislation needed to make things easier for them. Both parties are essential if the best is to be got out of the land and the

* See p. 3.

countryside is to prosper, and any recriminations between them are like Aesop's famous quarrel between the Belly and the Members.

This process is already going on and has been legalized in the Debt Conciliation Board Act. Mortgage banks have not yet been able to take a hand in it and it appears to be impossible for them to do so with safety under the law as it stands in the Punjab.

For the liquidation of agricultural debts* and the rehabilitation of indebted cultivators, it is very tempting to suggest a mixture of insolvency and Court of Wards proceedings, taking over the debtor's land and other assets, paying his debts at a valuation proportional to the value of his total assets, and then keeping him in leading strings for a limited number of years, while the instalments are being repaid, teaching him and his family the new way to live and farm. Alas, this is Utopian, and no organization, State or otherwise, could undertake such a task without the risk of unlimited loss.

But there need be no excuse for putting him into leading strings. Cheap money is essential to farming. Cheap money depends on security; security depends on sound and businesslike methods. These the farmer will never learn if he is left to himself. Except for the Alienation of Land Act which gave him no option

* A very promising scheme for the reconstruction of debt-loaded co-operative societies in Burma is described in Bulletin No. 3 of the Reserve Bank of India.

Its essential features are summarized on page 27 as follows:—

1. Debt conciliation by bringing down the outstandings against members to the present market value of their land.
2. Spreading out the conciliated debt into instalments within the paying capacity of the members.
3. Taking surrenders of land from the members and leasing to them this land as well as land already acquired by the society, the instalment already worked out being fixed as lease money.
4. Supplying crop finance to the members and thus saving them higher interest charges on loans from moneylenders, and facilitating repayment of the instalments.
5. Insisting on repayments in kind.
6. Introducing marketing, thrift and other essential co-operative activities in the societies and building up their funds.

but was an arbitrary order forbidding him to sell his land,* he has managed to make a dead-letter of all legislation devised to help him to help himself.

For those indebted cultivators who do really want to save themselves, however, some simple form of insolvency is undoubtedly wanted, which will enable them by thrift and hard work to liberate themselves in a reasonable number of years.†

For the future prosperity of the village, discipline and self-sacrifice will have to be exercised by both the principal partners in the agricultural enterprise. The moneylender will have to write down his capital to suit the times, to forgo any desire for personal power or influence and any idea of exploitation, and to confine himself to the financing of farming, rural industries, and the development of the countryside. The villager will have to turn over quite a new leaf; abandon ease, work with brain and muscle, early and late, in co-operation with his fellows; call a truce to all factions and quarrels, practise thrift, save money instead of squandering it; submit to being taught better living, better farming and better business, and above all educate his womenfolk and accept them as partners—and where money and spending are concerned, managing partners—in the great work of building up better, happier homes, and of achieving by hard work, and securing by thrift, a higher standard of living.

It may be noted that the change from individual money-lenders to rural banks and co-operative societies need not mean unemployment for anyone. A prosperous countryside greatly increases spending power, and a rising standard of living will mean a livelihood for very many more people than can be provided for by out-of-date farming and a debt-ridden population.

Nor let it be supposed that all the joy will go out of village life when the people are thrifty and free from debt. A wedding

* Why not carry the principle one step further and compel him to get permission before he borrows more than a certain sum except from his co-operative society?

† The Punjab Unionist Ministers have broken the back of agricultural indebtedness in their province.

which is financed from savings can be just as jolly as one which leaves a load of debt round the necks of the family; *kabaddi* and football are far more cheery shows than intrigues and factions, and homes are just as pretty and happy which have pictures and flowers instead of gold and silver ornaments; and homes where children are healthy cannot help being happy.

Thrift does not mean miserliness. Wise spending is part of thrift. Money is not an end in itself, it is only a means to a fuller life, the fuller life of a higher standard of existence, with culture, education, comfort, good health, and the happiness and well-being of ourselves and our neighbours as the ideals.

CHAPTER XVII

CRIME AND FACTION

THE reduction of crime is not solely a matter of more policemen, more magistrates, and more jails, though all of these are important; it is rather the recognition by every individual that it is the duty of a good citizen fearlessly and honestly, and without regard to his own personal convenience or connexions, himself to stand for truth, integrity and justice for the common weal. It is not for him to make accusations and complaints that the police are corrupt, and that justice is slow and uncertain; rather let him realize that the greatest service which the ordinary law-abiding citizen can give to the administration of justice and to the police is his help in creating sound public opinion against the abuse of the courts for private ends, and the corruption and bribery of the police. It is the failure to recognize individual responsibility which makes bad citizenship.

Whether it is the police or the patwari or some other functionary, villagers, particularly those who have been in the army, often complain bitterly of corruption and of the stirring up of trouble. Almost invariably, however, they speak as if the elimination of corruption of all sorts is merely a matter of stem

Government action. Government can do extremely little until it is backed up by a vigorous public opinion, until the backbone of the village is a sturdy peasantry too proud to pay a bribe and, lose or gain, a peasantry too proud to tell a lie. In nothing is the co-operation of people and Government more necessary than in the fighting of all kinds of graft and corruption.

All over the world it is agreed that the main causes of crime are defects and maladjustments in the social environment.* The peasant everywhere is proverbially a quiet, law-abiding fellow, and yet in the Punjab, a land of peasants, violent crime if not actually increasing is far too common. There must, therefore, be several things wrong with the social environment of the province, and when we come to look into the villages we find some of these wrongs : debt, poverty, ill-health, squalor, slum conditions of living, waste, competitive display and extravagance, dullness and idleness, in some places drink, and everywhere the utterly disorganized state of village life. From all these conditions crime is bound to spring.

Just as, in the matter of health, prevention of disease is better than cure, so in the body politic the prevention of crime should be considered as important as its punishment; and it is here that rural reconstruction has a leading part to play. The aims of this movement are:

1. Profitable work and interesting recreation
2. Better homes
3. Organized villages
1. **Work and play.** On the economic side are:
 - (i) Better farming
 - (ii) Rural industries
 - (iii) Thrift
 - (iv) Co-operative enterprise of all kinds to make what is worth doing at all still more worth while.

* The Home Secretary speaking in Parliament, several years ago said, 'Unquestionably by far the most important means of securing a diminution in crime is a general improvement in social conditions.'

These will not only increase wealth but keep the people, mind and body, busy in their present idle time. There are years of good hard work* waiting to be done for the improvement of home, farm and village.

Thrift and co-operation, that is to say, better business, are even more important than better farming and better industry for the increase of wealth, while consolidation of holdings† will not only mean better farming but will remove a continual source of irritation and quarrelling. The tattooing of cattle will help to remove yet another temptation to crime.‡

Then, to fill in spare time pleasantly and profitably, there are games and sports, wireless broadcasting, newspapers, cinemas, magic lanterns, cattle shows, ploughing matches, *melas* and tournaments and, most popular of all, dramas and singing parties.

Let us have good rough games like *kabaddi*, *pirkaudi* and football for the young men, and less rough ones for the older ones. Games will keep the villager fresh—all work and no play will never do!—and will be a great and very popular remedy for idleness and drudgery both of mind and body, besides being a grand outlet for high spirits and superfluous energy. All these things will keep the people occupied and spread goodwill and cheerfulness.

Edward Hyde wrote in 1853 (about England): 'It is a very hard thing for people who have nothing to do to forbear doing something which they ought not to do.' There are too many idle hours and days, and village life is too dull and monotonous. Where the villager is busy Satan is idle, and where the villager is idle Satan is busy—and Satan is a very expensive person to entertain in a Punjab village. He spells quarrelling, faction, litigation, crime, bribery, drink and vice.§

* Levelling, terracing, *waibandi*, bund-building, clod-breaking, weeding and roguing crops, fencing fields, mending, raising and straightening roads, filling depressions and making proper ponds at proper distances from the village, pit-digging, improvements to houses and compounds, and general tidying up and improvement of the whole village and its surroundings (pp. 64-7, 79-80).

† See pp. 155, 160.

‡ See p. 254.

§ See p. 245.

Work and play are the remedy. Something interesting—and if possible profitable—to do, and something to talk and think about, that is what the villager wants.

2. Better homes. But besides poverty, squalor and idleness, other potent causes of crime, quarrelling, drink and general ill-feeling are bad health and uncomfortable homes. In villages where the children are badly brought up, often ailing, crying, quarrelsome and undisciplined, where the goodwife does not know how to cook the food well or to train her children properly, where everything is slovenly and irregular, there naturally will discontent and ill-will tend to spread. When the home is happy, cheerful and well run, the meals are regular and well cooked, and the children healthy and well disciplined, who will leave it to join in a row or in any other sort of trouble, and where will the seeds of quarrelling and discontent find congenial soil to grow in? Good homes kill crime, vice and disease, and where goodwill and good humour abound, discontent and crime are rare.

There are yet deeper causes of crime and violence: the absence of self-respect and self-control. These virtues are essential to any community of people living in close association with each other, and failure to develop them is responsible for most of the troubles of village life, from dirt to extravagance, fighting, faction, waste and litigation.

It is the absence of self-respect that produces dirty villages, careless farming, lying, false evidence, and the giving and taking of bribes, and it is the absence of self-control that produces violence, faction, drink, vice and extravagance. Eliminate this awful list and the village will be a paradise.

Self-respect and self-control are taught in childhood,* beginning from the day the child is born—regular feeding, then clean and regular habits, finally the teaching of truth-speaking and the control of the tongue. All this is done by the mother and by the mother alone, who, if she has been herself well trained in childhood, will lay the lifelong foundations of self-control and self-

* See p. 122.

respect in her own children before they are six years old. All the virtues we want the men to practise can be implanted in them by their mothers in childhood—the dignity of labour, pride in home, village and farm, self-respect, self-control, truth-speaking and a clean tongue. No after-training can ever take the place of those vital six years and none but the mother can do this work. Give the mothers the training and the position of honour which will enable them to pass this training on to their sons and daughters, and the future health, peace and prosperity of the village are assured.

3. Organized villages.* The village is so often unorganized, insanitary and squalid, everybody is at sixes and sevens and nothing can be done except by official order and pressure from without. There is no authority to settle troubles as they arise, and so to prevent small squabbles spreading till the whole village takes sides and permanent feuds are created.

In every country where civilization is being spread into the villages, the village has a resident administrative and organizing body, and it is no less necessary in the Punjab if we wish for peace and happiness there. The Punjab village must be organized and a special chapter (see p. 141) is devoted to this. Both to defeat the torpor and squalor of the village and to make village life worth living, there must be some association, co-operative society,† panchayat, call it what you will—within the village itself. For long it will perhaps have to be set up, instructed and supervised from outside, but the association itself must be composed of residents in the village. In this way only will it be possible to solve local difficulties, to settle petty disputes and quarrels, to organize local institutions, and so to maintain corporate and peaceful village life.

* See chaps. xi, xii.

† None better for settling quarrels than the Co-operative Arbitration Society (see p. 160).

CHAPTER XVIII

SIDE-LINES

HARD WORK AND CO-ORDINATION

THERE are fortunately many ways of extracting value out of the land besides ordinary crop farming, but they all mean extra work, and when the farmer is already neglecting work*—such as weeding, composting, etc.—which will greatly increase the crops, what hope is there of persuading him to work overtime on side-lines? Flour milling has in the last few years become a most successful village industry, but how many farmers own and work either a *kharas* or a power mill? The principal benefit of village industries will be reaped by the non-agricultural tribes until the Punjab farmer will imitate the industry of the Chinese, or the smallholder of the continent of Europe.

The other essential for successful subsidiary industries is co-ordination.

Co-ordination is of several kinds:

1. Few village industries will yield much profit if run on the present wasteful, uneconomic, disease-ridden, and unskilful lines, and with the present inferior or badly prepared material. The research necessary to bring what profit and improvement are possible into existing village industries and to introduce new ones is done by various departments of Government. There are very few rural industries that do not involve several departments of Government for their successful development. The departments of Government must therefore combine, both with each other and with the villagers. This inter-departmental co-ordination has to start at headquarters and end in the village. Unless the local officers of all the departments concerned work hand-in-glove with each other and the villager, success in modernizing and developing rural industries is impossible.†

* Not for want of time! Very few farmers indeed are busy all day and every day.

† See p. 178. This is where the Officers' Board comes in.

2. Any village industry worth developing at all is far better worth developing co-operatively, to ensure that the producer shall be able to buy his implements and raw material, practise his industry and market his finished articles to the best advantage of himself and his fellow workers. The villagers must therefore organize themselves co-operatively (i) to learn better methods, (ii) to buy their raw materials, tools and equipment, (iii) to exclude practices which will spread disease or produce inferior articles, and (iv) to market the produce of their industries.

Given these two things—hard work and co-ordination—there is no reason why every farmer should not add something to his income by learning a new, or improving an existing side-line, besides having an interesting occupation for idle fingers, mind and time.

1. **Poultry.** Successful poultry breeding depends always on (i) pedigree and selective breeding, (ii) proper feeding and keeping, and (iii) proper marketing arrangements.

The present methods by which breeding is promiscuous, and the birds live in mud hovels and scavenge for their food, could not be improved upon as a means of grading down and destroying poultry. Not only do all the germs and insects which spread disease revel in these mud hovels but when the poultry do not pick up disease themselves as they scavenge in the refuse, crows and minas will bring it from other poultry in the village. It is useless introducing high grade poultry to the wretched environment in which poultry now live in the villages.

Government teaches poultry keeping,* and anyone who wants to add to his income in this way must take the trouble to learn how to keep and feed them properly. He can then either improve his own by breeding only from the best layers and best shaped birds or, better still, start with improved stock which he can get from Government or other expert poultrymen. Even so he is likely to be troubled with diseases caught from the badly-kept birds of his

* One of the best ways of teaching poultry keeping and spreading good stock is to keep pens of poultry at veterinary dispensaries.

neighbours, so that a co-operative poultry society, in which the whole village or as large a portion as possible joins in, gives the best hope of success.

Without good marketing arrangements, there is little cash profit—although, of course, there is plenty of good food—in improved poultry. For this purpose co-operative societies* are essential. The Christian missionary societies with their village and central organizations are extremely well-placed for organizing a poultry industry and there is no reason why the Christian community should not become the co-operative poulterers of the province.

2. Dairying. Dairying should theoretically be very profitable as there is a shortage of good milk and ghee in the towns and the price of milk is high. In actual fact, however, small-scale dairying does not pay because the townsman has not been educated up to realizing that pure milk and pure ghee are worth paying a bit extra for. He prefers to buy dirty adulterated milk or ghee at an anna or two a seer cheaper, thus killing the honest dairyman. It is also very difficult for individual dairymen to transport and market their produce.

Co-operative dairying societies,† formed by a combine of milk producers, are therefore required, and these must join with the urban health authorities in a 'drink more milk' and 'use pure ghee and pure milk' campaign.‡ The town authorities in the interests of the town should help in actively organizing dairying in the villages around. Co-operative consumers' societies in the towns ought to be able to combine with rural co-operative producers' societies for all kinds of fresh food as well as dairy produce.

3. Vegetables and fruit. For all these vitamin-producing foods—milk, ghee, vegetables and fruit—which must be grown near the towns and brought in fresh daily, co-operation is essential, and if possible co-operation of consumers as well as of producers and distributors. Fruit growing, like everything else, must

See p. 162.

† See p. 162.

‡ See pp. 101, 259.

be learnt, otherwise the grower will be harried by disease and will lose the benefit of the new and better types of fruit, and the new and better methods of husbandry continually being discovered by Government. Co-operative cold storage for fruit is an essential element of a successful fruit growing industry.

4. Dates. Good dates can be grown in parts of the Punjab, and as the geographical range of this wonderful fruit is fairly limited, the date industry contains great possibilities and should be an ideal opportunity for profitable co-operative enterprise. Date trees like to have their feet in the water and their heads in the sky and, therefore, grow best where other things are less happy and so where people are less prosperous. But the date is a slow-growing tree and reproduction is very limited, so that careful organization is required to develop the 'supply' side of the industry. The same care is required on the distribution side. To command a good market, dates must be good, clean, graded, and attractively and cleanly packed. Advertisement, marketing, and transport arrangements must be good, quality and standard must be guaranteed, and the whole service must be prompt and reliable.

5. Sheep and wool. No attempt is made by the villagers to grade up sheep either for wool or for meat, and the wool is dumped on the market in the crudest and least profitable way, and often deliberately adulterated with a large proportion of dirt to increase weight. Sheep are generally owned by nomads whose seasonal wanderings carry them from end to end of the province. Almost the only return they make for infinite free grazing and not a little damage to crops is the manure their flocks drop on the fields and pastures where they graze or are folded at night. The nomads are often high-handed and quarrelsome in their dealings with the local peasantry.

The English sheep two hundred years ago was much the same as the Punjab sheep is today, a raw-boned, coarse-woolled beast. Selective breeding, attention to disease, proper feeding and management can work wonders, and in no branch of farming could

improvement be made more quickly and more profitably than in sheep breeding.

As with other animals, selective breeding, proper food and keep, and attention to disease are the three essentials, but proper attention to disease, particularly parasitical disease, is especially necessary in the case of sheep.

A good beginning in selective sheep-breeding has been made at the Government Cattle Farm, Hissar, with one of the best indigenous breeds of sheep in India, the Bikaniri, whose wool and meat have already been considerably improved.

A new type of sheep, a cross between the famous Merino and the Bikaniri, has also been evolved and stabilized. In certain conditions it does extremely well and its fleece is heavier and more valuable than that of the local breeds. The Hissar Dale, as this new breed is called, has been successfully introduced into the Kangra District, but it is less active than the local sheep, being a heavier and less bony type, and like all highly productive animals it is not as hardy as the local sheep, and needs more liberal feeding.

The Veterinary Department hopes, through the location of pedigree rams in the villages for mating with the village ewes, to provide better quality wool for starting a village weaving industry. Of course the best use can only be made of this superior wool if it is processed and sold separately and not mixed with the coarser local wool. Here co-operation is essential between the Co-operative Animal Husbandry and Industrial Departments.*

Government's scheme of controlled flocks promises to be the best way of combining the teaching of better sheep management with the grading up of meat and wool. In this scheme Government, after surveying the province, buys sheep of the best local breeds and hands them in units of fifty ewes and one ram to selected shepherds who agree to keep them and breed them according to the instructions of the Government animal husbandry experts.

* See p. 235 n.

The terms are, of course, subject to revision as experience is gained, but at present they are very liberal. Government claims ownership of a constant herd of fifty-one sheep, but all increase beyond this number belongs to the shepherd, and so does the wool and any other by-products. Government is entitled to buy the surplus males and females at agreed prices and this enables Government to increase the number of controlled flocks and to provide superior rams both for exchange between the flocks and for issue to others. Another promising method being tried is the paying of a small subsidy to selected shepherds who agree to follow faithfully the instructions of the veterinary expert in the management of their flocks.

Although sheep are mainly owned by nomads to whom it is almost impossible to teach better ways of sheep management or co-operative organization, there is no reason why the zemindars of the *barani* areas should not own their own flocks. They have much spare time on their hands and if they owned sheep, organized themselves co-operatively, and spun and wove and knitted wool, they would have an excellent and most profitable subsidiary industry. A new spinning-wheel has been designed by the Department of Industries which enables wool to be processed both for weaving and for knitting, so that blankets and all manner of tweeds and cloths, fit even for export, can now be made in the villages. There are weaving schools at Hissar, Paniput, Kulu, Fazilka and elsewhere, and it is for zemindars to send their sons to learn and for District Boards to provide stipends to encourage them, and to organize the teaching of spinning and weaving in village schools. Otherwise this new industry, like so many other profitable side-lines, will be snapped up by the non-agricultural tribes, leaving the zemindars as poor and idle as before. This, it should be noted, is a man's industry, as it is the men in the *barani* areas, not the women, who are idle for months together.

6. Goats. Goats are a difficult subject. They produce cheap and easily digested milk, their flesh is preferred to mutton and

their hair and hides are valuable, while the Angora or Mohair goat, if introduced and acclimatized, would provide yet another valuable industry for the sale or processing of the hair. The same principles apply to the improvement of goats as to other live stock—proper feeding, careful selective breeding and disease control. At the same time the goat, in India as elsewhere when not properly looked after, has probably done more to destroy and desiccate the world than all the rest of God's creatures, put together, including man!*

The goat is called the poor man's cow—because the owner never pays for the browsing and mischief done by his goats! If the goat were called the thief's cow it would be nearer the actual truth, and if payment had to be made for what the goat ate and for the damage it did it would at once cease to be an economic animal. Goat keeping, therefore, can only be encouraged as an industry or as a means of providing food, if proper arrangements can be made for their fodder so that they shall not destroy the life and livelihood of the rest of mankind. Otherwise stall-fed cattle and buffaloes must provide the milk and ghee, mutton must be popularized as meat, and sheep must provide the hair and hide now obtained from goats.

7. Horse and mule breeding. There is a big demand for mules at fair prices in the Army, and Government and District Board provide donkey stallions, but except in the north Punjab the villager will not avail himself of this opportunity. The Army is ready to buy a lot of young mules at twelve months old and the rest it wants at three or four years old. The cultivator can supply all the young mules, but unless he used them to work his well or a flour mill or other machine, he would find it difficult to keep mules till they were three years old. He has to sell them at about one year old, and non-agriculturists, transport workers and others, buy them and sell the best to the Army several years later.

* The lopping of branches for milch cows and buffaloes can, however, be equally destructive, and cows will equally destroy young tree growth. Fortunately they are less active and less ubiquitous!

Horse breeding has ceased to pay as an ordinary industry and only continues to exist with the help of the Army in the Canal Colonies. Opinion is divided whether the putting of a heavy duty on imported geldings and the liberal encouragement of country-bred horse racing would serve to re-establish the horse-breeding industry, but *prima facie* one would have thought that protection combined with more races and better prizes ought to succeed.

The ideal place for horse breeding should be in the poorer parts of the province, where wells are scattered in the *barani* tracts. A system of annual premiums, graded according to the way the well owner kept his mare and produce, and the way he followed the instructions of the expert should be sufficient to induce every well owner to keep a mare in prime condition, to grow fodder crops and keep silos, and to farm and finally to live according to the instructions he received. A little money goes a long way in these areas, there is plenty of exercise ground, premiums are easy to raise or lower or to transfer, and instead of doing the minimum necessary to avoid losing a lease of colony land and grudging every acre not devoted to valuable cash crops, the well farmers would compete with each other to get the biggest premiums. The premiums and the occasional sale of a foal would mean a great deal more in the poor *barani* areas than in the well-to-do Canal Colonies, and it would be far easier to reduce or cancel a premium for neglect of instructions than it is to 'resume' a lease and evict the holder.

There is no society, however, with enough public support to try such a venture for the purpose of restarting a moribund industry, even if the shrinking markets for horses would make it possible. The only possible authority to undertake it would be the Army, but the Army is not a philanthropic institution and could hardly be expected to uproot itself from the Canal Colonies and start all over again in the *barani* areas in order to spread the wealth of the province more evenly!

8. Bees. Little is known about bee keeping in the plains, but there is an excellent bee in the hills and an excellent honey-flow in the wild flowers there. The villagers understand the handling of bees, and all that is necessary is the teaching of better methods of bee keeping, of honey collection and of co-operative marketing.

Bee keeping has now been started by Government Bee Masters in Kulu and Kangra, and as experience grows the industry will be spread along the hills and we hope in time to the plains also. The technical work is done by the Agricultural Department, while the Co-operative Department is organizing bee keeping societies of villagers.

9. Silk. Silkworms do well in the districts near the hills, and there is a big silk weaving industry in the Punjab. The problem now being worked upon by Government is to extend the rearing of silkworms along with reeling and twisting, so as to produce suitable silk yarn locally for the weavers. Once this is solved, it is hoped that especially at present prices the rearing of silkworms and the reeling of silk can be made into a useful subsidiary industry for smallholders if only they will take to it, as such, instead of leaving it to non-agriculturists as a whole-time occupation.

10. Lac. If prices for lac are low except as a subsidiary occupation for people with time on their hands there is little profit in lac. The Agricultural Department teaches how the wild plum trees (*ber*) are 'inoculated' and how the crop is collected. Marketing of the crop should be and sometimes is done co-operatively.

11. Fish. Fish are very useful food, fishing is a valuable industry, and India has many tanks and rivers. There is no doubt that fish and the fishing industry should be developed by Government and by the people just as is done with poultry, fruit and every other means of improving the food supply and the livelihood of the people. At present fish are apt to be neglected and the fisherman has rather a poor time of it.

Horse breeding has ceased to pay as an ordinary industry and only continues to exist with the help of the Army in the Canal Colonies. Opinion is divided whether the putting of a heavy duty on imported geldings and the liberal encouragement of country-bred horse racing would serve to re-establish the horse-breeding industry, but *prima facie* one would have thought that protection combined with more races and better prizes ought to succeed.

The ideal place for horse breeding should be in the poorer parts of the province, where wells are scattered in the *barani* tracts. A system of annual premiums, graded according to the way the well owner kept his mare and produce, and the way he followed the instructions of the expert should be sufficient to induce every well owner to keep a mare in prime condition, to grow fodder crops and keep silos, and to farm and finally to live according to the instructions he received. A little money goes a long way in these areas, there is plenty of exercise ground, premiums are easy to raise or lower or to transfer, and instead of doing the minimum necessary to avoid losing a lease of colony land and grudging every acre not devoted to valuable cash crops, the well farmers would compete with each other to get the biggest premiums. The premiums and the occasional sale of a foal would mean a great deal more in the poor *barani* areas than in the well-to-do Canal Colonies, and it would be far easier to reduce or cancel a premium for neglect of instructions than it is to 'resume' a lease and evict the holder.

There is no society, however, with enough public support to try such a venture for the purpose of restarting a moribund industry, even if the shrinking markets for horses would make it possible. The only possible authority to undertake it would be the Army, but the Army is not a philanthropic institution and could hardly be expected to uproot itself from the Canal Colonies and start all over again in the *barani* areas in order to spread the wealth of the province more evenly!

8. **Bees.** Little is known about bee keeping in the plains, but there is an excellent bee in the hills and an excellent honey-flow in the wild flowers there. The villagers understand the handling of bees, and all that is necessary is the teaching of better methods of bee keeping, of honey collection and of co-operative marketing.

Bee keeping has now been started by Government Bee Masters in Kulu and Kangra, and as experience grows the industry will be spread along the hills and we hope in time to the plains also. The technical work is done by the Agricultural Department, while the Co-operative Department is organizing bee keeping societies of villagers.

9. **Silk.** Silkworms do well in the districts near the hills, and there is a big silk weaving industry in the Punjab. The problem now being worked upon by Government is to extend the rearing of silkworms along with reeling and twisting, so as to produce suitable silk yarn locally for the weavers. Once this is solved, it is hoped that especially at present prices the rearing of silkworms and the reeling of silk can be made into a useful subsidiary industry for smallholders if only they will take to it, as such, instead of leaving it to non-agriculturists as a whole-time occupation.

10. **Lac.** If prices for lac are low except as a subsidiary occupation for people with time on their hands there is little profit in lac. The Agricultural Department teaches how the wild plum trees (*ber*) are 'inoculated' and how the crop is collected. Marketing of the crop should be and sometimes is done co-operatively.

11. **Fish.** Fish are very useful food, fishing is a valuable industry, and India has many tanks and rivers. There is no doubt that fish and the fishing industry should be developed by Government and by the people just as is done with poultry, fruit and every other means of improving the food supply and the livelihood of the people. At present fish are apt to be neglected and the fisherman has rather a poor time of it.

12. Handicrafts. There are many industries like tanning, leather work, rope and string making, basket work, gut making, spinning, weaving, dyeing and printing, woodwork and iron work of all kinds where the basic work of the industry is ancient and well understood. Here the main needs are the teaching of new and better methods, processes, and designs, the finding of new markets, and above all the co-operative organization of the workers. This last is most important so that their costs of production and of marketing may be reduced and they may still be able to make a living in spite of the smaller profit margins of modern industry and the increasing competition of the big urban factories. There will probably always be a market for hand-made and village-made stuff, but there will only be a living in these industries if the villagers are really well taught and well organized, and all unnecessary cost, waste and inefficiency are eliminated. In all these industries the departmental experts should be freely and frequently consulted as they exist solely to help the people to make a better living out of whatever trade they practise.

A very great variety of metal goods can be and are being made in the villages, chalk-cutters, cane-crushers, knitting machines, parts of bicycles, sewing machines and engines, cutlery, plough-shares and mould-boards—even the big power-driven machines that cut and shape the metal are village-made. These small-scale industries in town and village alike, whether working in iron or in any other kind of material, will absorb agricultural labour that is temporarily or permanently surplus to requirements in a far more satisfactory manner than the big capitalist factories, and from the hygienic, social and every other point of view they should be encouraged and enabled to survive and to prosper.

There is one important warning. Beware of adding to the burden of the already overworked women. The first job of the woman is running the home and bringing up the children. When she has done that fully and well, she must be allowed a little reasonable

recreation—men are not the only people whom recreation benefits! If then there is any time over, by all means let her practise a subsidiary industry. In the Punjab village it is the men not the women who have time on their hands—particularly in rain fed and unirrigated areas—and subsidiary industries are primarily and mainly for the men. It is the men for whom we must find profitable ways of increasing their family income and of using up idle time which might otherwise be spent in occupations that waste the family resources, or which even Satan might succeed in claiming for his purposes.* Whenever, therefore, a new industry or a new process is introduced, be careful to train the men to do it and make it the men's business, as if once the women take it up the men may refuse to touch it.

CHAPTER XIX

MISCELLANEOUS

THIS chapter contains short notes on several subjects of importance for which room could not conveniently be found in the other chapters.

1. **Ornaments.** The subject of ornaments has been described as controversial, and the campaign against the excessive use of them as a fad. This is mere nonsense. The position is simple and logical. The desire for decoration is quite natural and laudable but there are certainly many other ways of expressing it than by the barbaric display of gold and silver. Children can be clean, healthy and bright. What clothes they wear can be neat and clean. Women can learn to make pretty clothes for themselves and their children. Flowers, pictures, and a tastefully decorated home are within the reach of most of those who now get into debt to load themselves with trinkets.

As for gold and silver ornaments, they have no place on men who complain that they are too poor to pay their taxes; and in a

country where they are so coveted the flaunting of excessive and expensive ornaments by either men or women in the presence of those who cannot afford them is merely tactless and unkind. For women, no prohibition is needed. It is enough to educate them, and then leave them to decide for themselves whether they should spend their money on ornaments, or should content themselves with such a reasonable amount as they can easily afford and spend or bank the rest of their savings for the security and improvement of home and family.

As a means of accumulating savings, ornaments are out of date and inefficient compared with savings banks, co-operative banks, insurances, cash certificates, and other modern methods. Ornaments wear away, are lost or stolen, and are a source of anxiety to their owners and often of envy and rivalry to the neighbours.

The alteration of ornaments to suit changing fashions costs money and even without an undue addition of alloy, they are rarely ever again worth their first cost. Between 1890 and 1930 about two thousand crores of rupees (a crore of rupees every week) left India to buy gold and silver. Imagine the increase in wealth and prosperity if instead of being all locked up in gold and silver it had been spent on wells, bunds, orchards, workshops, industries and other productive purposes!

Children—boys and girls—should never be allowed to wear ornaments, and in this case a positive and vigorous attack should be made upon prevailing custom. The reasons are as follows:

(i) Nothing can add to the beauty of a clean, healthy, happy, intelligent child, and therefore they are unnecessary.

(ii) Children are frequently robbed and murdered for their ornaments.

(iii) Children cluttered with ornaments cannot be washed properly and cannot play properly, and therefore their health and so their beauty is endangered by a custom whose only justification is the increase of beauty!

(iv) The custom involves a waste of money.

GIRL ROBBED OF EAR-RINGS

ORNAMENTS STOLEN CHILD CARRIED AWAY BY PASSER-BY

How Sakina, a girl of 7, was deprived of some silver ornaments was related to the Sadar Police, Delhi, by Jafar Ali, a tongawala. According to the Veterinary Hospital in the morning and street children, he took his son on his return home. Ali later said when in the shop of a girl was robbed her of her some sweets and her to a pretext of she removed bolted away.

(Our Correspondent)

Lahore, April 25.

(From Our Own Correspondent)

Lahore, Jan. 2.

A pathetic report of how a nine year old boy was strangled to death for the sake of some ornaments is received from village Jhandu Singh.

It is stated that some silver was playing man went to side the village of giving stranger camped police the dead body investigation.

FATAL FIGHT OVER A TREE One Killed and Six Injured

A dispute over the ownership of a tree led to a free fight with lathies and axes between two factions of Jats in Hapowal village, Jullundur District, and one man was killed and six men were injured. The police have arrested 15 men belonging to both parties.—A.P.

(v) The wearing of ornaments teaches the children habits of extravagance, and

(vi) makes them vain.

(vii) The boring of holes in children's ears is extremely painful, as no anaesthetics are used. It causes many days and nights of suffering and occasionally permanent harm to the outer or inner ear, while blood-poisoning or tetanus are quite possible as no antiseptics are used.

The young of all species are beautiful and the human child is no exception, provided it is kept clean and healthy and its intelligence is awakened and developed by proper training and education.

2. Unwanted dogs. Many of our villages swarm with noisy, mangy, miserable and often entirely useless and unwanted dogs. The destruction of full-grown dogs, besides being an entirely ineffective method of controlling the canine population, is also an expensive, clumsy and nasty one. By far the easiest, cheapest and least objectionable method is the drowning at birth of unwanted puppies, and if this duty were laid upon the village menials, the dog population could be brought under control in a year or two. To avoid more suffering than necessary, one puppy per litter can, of course, be left for the mother to suckle. Once such a custom has been established, villagers will probably begin to select the best puppies and litters for survival and many will possibly begin to take an interest in the bringing up and training of individual puppies which they have saved from destruction. But to allow, for sentimental reasons, unlimited numbers of puppies to grow up and then, when the nuisance becomes unbearable, to employ whole-time qualified doctors and veterinary surgeons to destroy them, is utterly to be condemned; at any rate until all the money necessary for the medical needs of women and children has been found.

3. Cactus. This can be entirely and harmlessly eliminated free of charge by the introduction of the little white cochineal insect. A small parcel of these spread over a few plants will kill

them in a year. As the insects increase they can be spread on to other plants and patches, and when they have done their work, they disappear and do no harm whatever to anything else. Many hundreds of acres have been reclaimed in the Gurgaon District with their help. A most obliging insect!

4. Locusts. Locusts are a world problem but in each district they are a matter for local organization. The movements of every swarm must be watched and reported. The moment they settle down, particularly in the breeding season, they must be attacked in full strength by every available man and child. Flying locusts are sluggish and extremely vulnerable in the damp and cold of the early morning, and when mating they can be destroyed all day. Fire and poison are far less quick and certain and more expensive than simple crushing with rollers, harrows and ploughs, and with boots and shoes and flat wooden beaters or thick sticks. If every opportunity of crushing the full-grown locusts is fully taken, the strength of the swarm will be greatly reduced.

The next stage of destruction is egg-collecting, soon after mating has begun and in the same place as the mating takes place. The eggs are laid just under the surface in clusters of one to two hundred in sandy soil. Offer an anna or two a seer and the children of the villages round will bring them in millions and millions. They will not find every cluster but by the time the eggs hatch out into 'hoppers', their numbers will have been still more reduced. Now comes the final stage, hopper-crushing. The hoppers march, eating up everything green in their path. Trenches are dug in front of them and the hoppers are guided into the trenches by upright sheets of galvanized iron and crushed in the trenches. As the trenches are filled or the stench of the crushed locusts makes the swarms of hoppers change direction, fresh trenches are dug. And so the fight goes on; if the work is done well, there should be few if any left by the time the remnant of the swarm gets its wings and flies away.

The most unsatisfactory stage of killing the locust is the

hopper-crushing. Fire and poison are not ideal methods,* and nor is trenching as the crushing of these little hoppers is difficult, and it means the continued digging of new trenches. My own belief is that the easiest and quickest way of killing hoppers would be by machinery, and I hope that this will be tried as soon as possible and when machinery can be obtained. A mobile power-driven suction-pump would be brought to the flank and an armoured hose run out across the front of the advancing host. At the end of the hose would be a mouthpiece like the trumpet of a loud-speaker or a big gramophone. This mouthpiece would be sunk below ground level so that the hoppers, guided by the galvanized iron sheets would flow into it, and be sucked away by pump and driven through a mangle. As the mangle would be well away to the flank of the swarm, the smell of the crushed hoppers would not frighten the swarm, and I believe that in this way the whole swarm could be sucked up and destroyed. Anyway it is worth trying, and if successful, it would, with crushing and egg-collecting, solve the local problem of destroying locusts in each district they visit.

5. Accuracy and training. Every effort should be made to do things right the first time, whether it is building a drain, fixing a ventilator or mending a well-top. If a drain is made the wrong way it will certainly have to be raved up and redone in a few months, and this costs money and discourages people. Plans and models of most of the common things can be obtained and these should be studied before villagers are asked to spend their time and money on improvements. Rural reconstruction is the practical application of the principles of many sciences, but when it reaches the villages, it must be very simple. It must, however, be very definite and as far as it goes absolutely accurate. It is no use being vague with the villager and it is still worse to tell him things which are not correct. All workers, therefore, whether official or non-official, require training.

There is no institute or school in the Punjab for training in rural reconstruction, but courses are arranged for those who

desire them. Training should last about three months, beginning with several weeks spent at headquarters studying, asking questions, listening and discussing, and followed by tours all over the province to see new and good work in actual progress, with intervals for further study and discussions at headquarters. The Skinner Estate is visited near Palwal to see what a landlord can do by continuous effort. At Phillaur the co-operative consolidation of holdings is studied. In Montgomery District is seen what rural civilization can look like in its most advanced form and in the most favourable circumstances under the inspiration of the District Officers. Anti-erosion and health work in Hoshiarpur, cattle improvement societies in Amritsar, and so on; each tour must vary according to what each student most needs to study and what can be seen at its best at the time, throughout the province.

6. A weekly holiday. There is no doubt whatever that everyone, official and villager alike, would be the better for a regular weekly holiday, and it would lengthen considerably the lives of the working cattle. It is no fluke that the most successful peoples in the world are those who in the past have laid the greatest stress on resting on the seventh day. A regular holiday ahead is an incentive to hard and cheerful work, whereas hard continuous work, with no regularly recurring holiday to look forward to, soon becomes depressing and may easily deteriorate in quality. Besides, just as a wedding or other social occasion paid for by savings is far more enjoyable than one paid for by borrowing, so too a regular holiday earned by a fixed period of good hard work is far more enjoyable than an accidental day off coming by chance after an indefinite period of work which has lost its zest.

It is not an idle day which is wanted so much as a day of changed occupation, mental and physical. Those who have sat all the week at office desks require physical activity. Those who have been ploughing or reaping and busy with farm routine for six days will sit about and talk, read or loosen their limbs with games. And all should refresh their minds. The impressions

and the thoughts of the week will, during the relaxation of the seventh day, settle into their proper pigeon-holes in the mind ready for future use, and all staleness and confusion will disappear. More and better work is done in a six than in a seven-day week.

Besides providing a holiday, the seventh day provides the opportunity for a much needed weekly clean-up.* For six days everybody does his job, and is as clean and tidy about it as possible. But on the seventh day or on the sixth evening every one sets about giving the home and the village a special polish. On that day corners are looked into, and everything that got left out during the busy week is attended to, clothes, children, stables, fowl-houses, nothing escapes. Those who select their day of worship for their weekly holiday will find that religious observances are more enjoyable and far more effective in an aroma of perfect cleanliness. And in the afternoon, what better than games, or a ploughing match, or a picnic for the children? Later in the day come the meetings of the village council, the Women's Institute, or any other community activities which have been established, while the wireless programme marks the end of a perfect day!

7. **Quinine.** † This is a very expensive drug in the quantities required to have any real effect on malaria. The quinine trade is in the hands of a ring, and most of the world's quinine comes from Java. I do not know whether, like all competitive industries in the world, the quinine industry has rationalized itself written down its capital, cut down its working expenses and done everything possible to maintain and expand its trade in an impoverished world, but the fact remains that at present prices the Punjab will never consume sufficient quinine to keep down malaria. If Government sells below world prices, the drug will be smuggled out of the country and Government will be bled white to no purpose. What is the remedy? In the first place the Royal Agricultural Commission pointed out that, given the

* See p. 217.

† See p. 110.

necessary research and effort, there was no reason why India should not itself grow and manufacture good quinine instead of relying on Java. Suppose this were done and with the help of Government, trade, and philanthropy the whole business from sowing the seed in the plantation to marketing the finished article became a Public Utility Corporation. Even if at first the price had to be kept parallel with world prices, all profits and all contributions would go to the extending of the quinine business or to other forms of anti-malaria work, so that finally not only would India get enough quinine for itself but perhaps an export trade could be built up. There are many ways of defeating the effect of a high world price in order that quinine could be marketed at a price that would make its general use possible. What about, for instance, a village quinine bank? The quinine would sell over the counter at world prices, but the share-holding purchasers would finance all their community necessities out of the profits.

Until, however, quinine distribution is tackled on a 'global' scale the difficulty of high prices will remain. An internationally fixed price for the retail sale of quinine is required, and the price must be so low that even the poorest can pay it. The difference between this price and the cost of production must then be met by Public Utility Corporations financed by Governments, philanthropic societies and public subscription. Meanwhile the increase of production, which will be stimulated, will steadily bring down the cost of production until perhaps subsidization is no longer required. But whatever is done the 'quininization' of the world and the expansion of quinine production must not be allowed to be held up for want of money to buy this most essential medicine.

8. Untouchability. * One of the ways of helping in a most practical manner to kill untouchability would be to remove one of its main props—the carrying of night-soil by certain castes. Many missionaries have done this for their homes and

* See p. 37.

quarters by using some form or other of the septic tank principle for latrines and urinals. This should be used for all residences where flush sanitation is impossible, and for rest-houses something should be devised which is suitable for occasional use only. Either flushing arrangements or some sort of hole in the ground or some form of septic tank should be the absolute and universal rule and, except in sick-nursing, where no stigma attaches to menial services, on no account should any human being ever be expected to handle crude night-soil. Government is usually very backward in modernizing its sanitation and is thereby helping to perpetuate untouchability.

9. Cattle-lifting and tattooing. Cattle-lifting in some areas is a terrible curse. The ploughman cannot be certain of his team nor the housewife of her milk and by being unable to tether his cattle in his fields at night, the farmer loses his best fertilizer. The grading up of cattle is useless when there is no security of possession, cattle-lifting corrupts all classes of the rural community. This evil has often been more or less acquiesced in by Government and public alike, but its elimination is one of the most important items of rural reconstruction.

It has been proved that properly tattooed cattle are very rarely stolen. Accordingly a scheme has been drawn up for the voluntary tattooing of cattle in the Punjab. With the help of the alphabet and the English numerals, twenty-four symbols have been selected, none of which can easily be altered to resemble any other. With three symbols twenty-four villages in each *thana* of the province can be distinguished. After twenty-four villages in any single *thana* have joined the system, new ones will have to use a four symbol cypher. The district, *thana*, and village cypher is punched in the near or left ear and with another three symbol punch the quarter of the year in which the tattooing was done is recorded in the off or right ear.* A satisfactory ink has been found, a register prepared and punches and symbols ordered from England. Any landlord, panchayat, Court

* If the tattooer desires he can put a serial number in the right ear.

of Wards, co-operative society or other institution, wishing to tattoo their cattle must obtain a certificate from the Superintendent of their District Police that they are fit to be trusted with a cypher and they can then order their equipment from the Commissioner, Rural Reconstruction, Punjab. The register is not obligatory but obviously the tattooing will be more valuable if a full record is kept. The form is in triplicate and when an animal is transferred, one copy is given to the new owner, and a second copy is lodged in the police station for record. Only such persons or societies are given certificates for the purchase of tattooing equipment as are known to be genuinely anxious to assist in fighting cattle-stealing and will not abuse the system by carelessness or by collusion with thieves. It is not suggested that every animal should be immediately tattooed. All calves should be done and such full grown cattle as are valuable and are docile enough to make the operation reasonably easy.

Tattooing requires skill and practice and the Police and Veterinary Departments are ready to give every assistance in teaching cattle owners to use the punches and in getting the system started. But the work must be done, the payment made, and the registers kept by the cattle owners themselves. The villagers must help themselves,* in this important matter, as in everything else, if they wish to get rid of the curse of cattle-lifting and to have a peaceful prosperous countryside.

10. Armistice Day—and the ex-soldier. At the end of the first War a great opportunity was lost of binding the ex-soldiers together in some form of association for their own welfare and the good of their country. Every year comes a splendid chance of renewing their comradeship and refreshing their loyalty on Armistice Day,† the one day in the year when the old soldier is once more the pride of his grateful country.

We must do better after this War. The soldiery must not be

* See pp. 14, 15.

† These were begun—with great success—in the Punjab, a few years before the second War started but were unfortunately stopped when this War broke out.

allowed to drift apart, forget their discipline, loyalty and comradeship, and fritter away their savings and their time in factions and feuds and lose all the benefits of their military service. The best way of binding them together would be by means of co-operative societies in every village from which soldiers have come. The soldiers would not be segregated in these societies for as many of their neighbours as were willing to join would be enlisted too. The objects of these societies would be various; as usual in co-operation, they would be formed—if not already in existence—for whatever was the most generally felt need at the moment, such as consolidation of holdings, better living, better farming, cattle improvement, medical aid, rural industries, etc.*

The military classes are very anxious for their full share of the commissioned ranks, but probably the main hindrance to the achievement of this laudable ambition is the absence in too many of their children of that background of general knowledge and culture which can only be imparted by an educated mother.

11. Game preservation. During the sixteen years that followed the first Great War, not less than nine-tenths of the marketable game of the Punjab was destroyed. To this must be added the equally mischievous destruction of the insect-eating birds upon whom the farmer relies for protection from the many pests which attack his crops, his fruits, and his timber. A law has now been passed and an attempt to enforce it has begun, but much more will have to be done to restore things to anything like what they were before. The chief evils are netting and the killing of game during the breeding season, and the best way of coping with them is to control transport and marketing.

There is no better way of making a close study of a countryside than by shooting over it, and abundance of game makes touring far more attractive to both civil and military officials, so that in his own interest the villager would be wise to insist upon

the safeguarding of such a useful asset. At the same time, this stupid annihilation of wild life has brought no profit to the villager who supports the game, and there is no reason why both sport and the marketing of game should not be combined with the maintaining of an ample stock of game and the definite financial benefit of the villager.

It is probable that sporting rights will soon have to be recognized and developed as the best way of preserving what is in other countries a recognized rural industry. Individuals or syndicates will then be able to come to terms with villages or groups of villages for their goodwill and assistance, and as game is usually commonest in poor tracts of country, this will bring a welcome addition to the income of those village communities which are accessible from the larger centres.

Those who are interested in the preservation of wild life, either for its own sake, for the help that so many birds give the farmer and orchardman, for sport, or as a rural industry, should do all they can by example and precept to discourage the killing, eating or marketing of game during the breeding season, and to prevent the destruction of game by illegal methods, and should join the local Association, where there is one,* founded for the protection of wild life.

12. Ribbon development. At crossroads, bus halts, country railway stations and other such rural traffic centres the most appallingly filthy little bazaars are springing up. The residents are completely without any sense of smell or sanitation, and without any desire to live in nice surroundings. They must be compelled to build under licence and in places where drainage and sanitation are possible, and they must pay for both. Wherever possible the bazaar must be set back far enough for carts and lorries to halt without blocking traffic on the main road. If the present law is inadequate, then, to secure control, it must be suitably

* In the Punjab, N. W. F. P. and Delhi, the Northern India Association for the Protection of Wild Life; the Secretary's Office is at Dharamsala, Kangra District.

amended, as the present state of squalor on both sides of our roads, and sometimes on the roads too, is a disgrace to civilization.

13. Urban uplift. The whole of the health side of village uplift applies equally to the towns.

Vaccination, ventilation and pits are equally necessary in towns—even more so. The Municipal Committee must dig the pits, and it would be wise to make each pit of the right size for one *malis* to buy so that they may be sold direct to *malis* and not through middlemen. Pits should be filled and closed quickly, and a record of dates kept so that by experience the right date for selling each pit may be correctly estimated. No pit should be sold till it is 'ripe', and water should be added if necessary to hasten decomposition. Far better than pits, however, and far more profitable, is the Indore system of compost making,* which should be introduced as soon as possible. Latrines in ample number should be provided all round the town, not of the kind which demand efficient service, as that means they will stink too much to be used, but some form of hole in the ground or septic tank which will require as little service as possible.

By-laws must compel every shopkeeper and householder to keep a rubbish bin, and these must be emptied daily by the municipal dustman. On no account must rubbish be thrown into roads, streets and open spaces.

Clean habits must be taught by all the means suggested in this book, and above all by the personal example of the city fathers in their own homes and the official example of the municipality in its offices and institutions. Municipal servants not setting a good personal example must be removed.

The Municipal Committee must steadily encourage by all means possible the production, distribution and consumption of pure milk and ghee, fresh vegetables, and other ingredients of a good diet. Good marketing arrangements, testing stations for milk and

* See p. 60 and *Pit Pamphlet*, p. 290 (1).

ghee, the encouragement of co-operative dairying* in the villages round, a 'pure milk and ghee' and 'drink more milk' campaign,† are all means of helping. If adulterated milk and milk products are allowed to sell, honest dairymen cannot live. Co-operative consumers' societies in the towns for all kinds of fruit, vegetables and dairy produce must be encouraged. As soon as dairying is well established outside the town and good milk and ghee are easily procurable at reasonable prices in the town, every effort must be made to get all the cattle out of the town. Meanwhile, the town must keep approved dairy bulls and must have by-laws to regulate the loosing of bulls and strictly enforce them, as bad bulls are a nuisance outside as well as inside a town.

. Quinine and mosquito-nets must be popularized. Playing fields must be provided, boys' clubs and sports clubs and sports meetings organized and encouraged.

Girls' education must be properly organized and equally good school buildings, playgrounds and equipment provided for girls as are provided for boys.

Women's parks and gardens, Women's Institutes, health centres, dai-training, and women's hospitals, are far more necessary than similar institutions for the men.

Cultural institutions, libraries, dramatic and musical societies, public lectures, wireless broadcasting are very badly needed. Every philanthropic institution such as the Red Cross, the Boy Scouts, Girl Guides, must have its branch in every town, and citizens must be taught that one of the duties of good citizenship is to support, with service and money, every institution that makes for the health, happiness, culture, comfort or convenience of themselves and their neighbours.

* See pp. 100, 237.

† Towns which raise money by organizing cattle markets are doubly bound to devote money to the development of dairying.

CHAPTER XX

WINNING THE PEACE

I. THE EX-SOLDIER

At the end of the war more than a million magnificent young men will be unloaded into the villages of India. They will be in splendid physical condition, accustomed to good regular food and plenty of exercise. They have fought with conspicuous gallantry. They have been treated with respect and affection by their officers and by the people of many countries. They have acquired self-respect and a very high standard of living. They have become used to modern conditions of housing and sanitation. They have seen new countries and places, have learned new trades and acquired new skills, have learned indoor and outdoor games and become familiar with the radio, picture papers, gramophones and cinemas. The whole mental outlook of these young men has been changed.

To what are these men returning? Many of the villages are unorganized, dreary, insanitary, overcrowded and uncomfortable. Many of the houses are small, dark and smoke-ridden. Most of the old folks at home are narrow-minded, conservative, uneducated and untravelled. There are no organized games and recreations, no books, no daily newspapers, no radio, no shows, exhibitions and tournaments, no opportunities of meeting and exchanging ideas and experiences with one's fellows. The corruption of petty officials makes rural life uneasy and troublesome. The villages are often torn by feuds, and in some parts lawlessness, violence and the making of illicit liquor are increasing. Worst of all, perhaps, the soldiers' women-folk have not been exposed to any of the modernizing influences which have so changed the men; they are still completely uneducated and have rarely been outside the boundaries of their village. They will meet the soldiers' new outlook with an uncompromising medievalism.

* This chapter is based upon the pamphlet of the same title, No. 25 in the series of *Oxford Pamphlets on Indian Affairs*.

The returning soldier has been told that he is fighting for a new world of happiness and justice. He has been promised a bright future. He has been taught that village life can and should be healthy, peaceful and progressive. But he will find the villages run by cliques who resent progress, oppose those who try to do anything new, and by intrigue or mischief trip up anyone who tries to come into prominence as a teacher or practiser of the new way of life. The returning soldier will be the prey of every kind of theorist, agitator, grumbler and grievance-hunter.

What will happen to our ex-soldier and how will the village receive him? Will the magic word 'home' cause him to shed his ideas and enlightenment, to abandon his habits of vigorous thought and action and, while resisting all evil influences, to slip quietly back into the easy-going groove of the ancient ways and customs? Or will he explode and become either a fervent reformer, a red-hot enemy of all government or a violent and dangerous criminal?

Without the most careful preparation it will be impossible to fit the modern soldier peacefully back again into the ancient village, and in the Punjab, at any rate, unless this can be done, things may become very difficult indeed and at the worst possibly entail disorder and bloodshed.

Preparations will cost money but it will be money well spent. I am convinced that a carefully planned and executed scheme of national reconstruction, based on the land and the people who live on it, will enable us to harness the comradeship, initiative and training of the ex-soldiers to a great movement of rural development and culture. The alternative of holding down a disgruntled soldiery by force will cost just as much and will leave a legacy of destruction and bitterness. What waste of a unique opportunity to use this wonderful material to build a better India.

Three things are required:—

(1) The civil government at once to make their plans to develop the areas under their control, so that not only will they be able to absorb the demobilized soldiery and enable them to make

a reasonable livelihood, but that the standard of living of the whole country shall be raised, as it is obviously impossible to attempt to keep the ex-soldiers' standard high while the rest of the people are left as they are. The ex-soldier must not be a privileged class, he must be a pioneer and demonstrator of the new way of life.

In a big-scale plan of development the ex-soldier will have three chances. He can either join in as a civilian and make the best use of Government's plans for his own betterment, he can help to provide the many goods and services that large-scale development will demand; or he can be employed by Government itself in executing its plans and projects or in teaching and demonstrating the new and better way of life and livelihood recommended by Government. Without large-scale development it will be quite impossible even to settle all the soldiers happily back into civil life, much less raise the whole standard of living of the general population.

(2) The serving soldier must be prepared so that he may be ready to play his full part in the great drive for a healthier, wealthier and happier India.

(3) Demobilization must be carried out in a manner calculated to ensure that the demobilized soldier shall have the best possible chance of settling himself back happily into civil life, and that there shall be the least possible dislocation of national life during the changeover from war to peace.

As for the preparation of the soldier, village uplift and vocational training are two of the principal subjects of the Directorate General of Welfare, Education and Resettlement and are regularly taught by regimental officers in parade hours. Special pamphlets of all kinds are issued. Films, pictures, posters, radio talks, dramas and other kinds of popular education are being planned to interest the men in the subject,* while in training centres exhibitions and small but well-equipped farms are being established where every kind of profitable work can be taught

* Such popular education has already started.

and demonstrated. In co-operation with the civil governments special lecturers and instructors have been and are being appointed.

Practical training in every possible activity—farming, cottage industries, handicrafts, etc., is being planned for the Armistice period when of course all this kind of education will be greatly intensified. An organization to improve and develop contacts between the military, the civil and the ex-soldier after the war has been developed by means of Liaison Officers and revived Soldiers' Boards. Employment bureaux and agencies are being established to enable those who want it to find work in industry and all kinds of service.

A savings scheme for serving soldiers is being worked out and the Army has opened a post-war reconstruction fund. This fund already contains several crores of rupees and will be used to assist in financing schemes of permanent benefit to the ex-soldier and the soldier class, and in enabling ex-soldiers to make the most of the civil plans. This fund is not a general fund and will not replace civil funds or relieve the civil government from providing money for all kinds of development.

It should be remembered that even before the war rural reconstruction was a subject taught in all regimental schools, while in all married lines there have for years been health and welfare centres for the women and children. These are being expanded into instructional centres where women can learn some of the many things a housewife ought to know to enable her to run a home and keep a family in health.

Who knows but that by putting a blue-print of a better India into the hands of this vast body of trained and disciplined young men, we may not throw up constructive leaders who will return home to lift their country to a great place among the United Nations?

So much for the Military. What is happening on the civil side? The Military will be completely hamstrung if the civil plans are not ready when the time comes. And the civil plans

will take a long time to prepare and mature as they involve the development of a sub-continent and must be so advanced that they will be ready to help to train and thereafter to absorb and utilize both the ex-soldier who wants a Government job in the development organization, and the ex-soldier who merely wants to go home and make the best of the Government plans for his betterment.

If the civil administration cannot use the soldier with the gift of the gab to preach and demonstrate uplift he may quite possibly find employment in preaching against the administration! If the civil administration cannot employ the soldier with a gift for organizing and leadership he may soon be found leading a band of dacoits! If there is nothing productive for the soldier to spend his savings on he may easily fritter them away in unproductive and even undesirable ways.

There will also be vast quantities of military stores for disposal, some of which might be very useful in civil development.

As soon as civil plans are drawn up they will be explained to the serving soldier and he will be taught how to use his brains, his savings and his labour to the best advantage, in co-operation with his fellows and his Government, in the improvement of his life and livelihood.

Do not let it be imagined that the serving soldier is not interested in rural development or that 'uplift' is a dull and 'goody-goody' subject. The very reverse! The soldier is intensely interested in the possibility of improving his home and village, and uplift is an excellent subject of discussion in the hands of those who understand it and believe in it.

Holding the ex-soldiers together

These proposals make the soldier the most important man in the village. I see no harm in this. He has saved his country in war time; let him save it in peace time, too. In any case there is no alternative. In years gone by, too little use has been made of the ex-soldier's special qualities of loyalty, discipline and a high standard of living. Except where the soldier class forms the

majority of the population the ex-soldier has often had to be content to play second fiddle. The first War never came near India. This war has already come near. The Indian soldier is very definitely and obviously going to save his country.

The civil official, and non-official, may therefore be all the more easily persuaded to put the ex-soldier on a level with himself after this war and to co-operate with him in winning the peace. In any case it must be clearly realized that every 'live' ex-soldier who is idle after the war will be a source of potential danger to the peace of his country and will be an asset to his country's progress wasted. Civil commotion will cost as much as development. Five thousand men employed as extra magistrates, police and jailors, will cost as much as the same number employed as organizers of a higher standard of living.

A million and a half soldiers will come home with plenty of money in their pockets and ideas in their heads. Are we so blind or so hide-bound that we cannot use them to build a new and better India?

Some people would like the ex-soldier to forget that he was ever in the Army, and to revert entirely to civilian status. This must never be allowed. It will be a terrible mistake to try to demilitarize the soldier when he returns to his village and to tell him that he must forget his old loyalties and become only a citizen. The soldier must never be allowed to forget that he was once a soldier. The virtues of the soldier must be carefully preserved and applied to the purposes of peace and good citizenship. The organizing of rallies and reunions will therefore be a great feature of post-war rural activities on Armistice day, battle anniversaries and other high days.

One of the greatest dangers in the post-war period will be that the soldiers may drift apart, as happened after the first War, lose their spirit of comradeship, loyalty and discipline and start quarrelling with each other and waste their time and money in factions and litigation, instead of getting on with the good work of improving their farms, homes and villages. This must never

be allowed to happen again. The ex-soldiers must be held together and organized. The Soldiers' Boards are an official organization existing to carry out certain well-defined duties, but it will be quite impossible for them to hold the soldiers together in the thousands of scattered villages from which they come. The only way to achieve this is by organizing the soldiers in every village and town and the ideal organization for this purpose is the co-operative society. It is well understood all over India, it is carefully and closely supervised by Government, and it has its own statute to assist and protect it. Every village should have one or more co-operative societies including all the soldiers and as many others as possible who will join them.

The objective of the society might be what is known as 'Better Living', which means village uplift. The first thing the society would do would be to get a reading room, a radio set and some books and newspapers, then a recreation ground. Thereafter it would take up the various items of the uplift programme as fast as the members are ready to carry them out. It would act as peacemaker in any squabbles which might occur among its members, and so prevent feuds and litigation. In the case of landless men (including many of the Mazhabis, Ramdasias, etc.) the society might be a co-operative industrial society. Where land requires consolidation or conservation this might be the object of the society. The actual work for which the society is founded matters little; it is the co-operative machinery and the co-operative spirit which are wanted to bind together the ex-soldiers and their neighbours.

Such societies would be held together not only by the inspecting staff, who of course would be ex-soldiers and ex-officers, but there could be a special radio programme for them and special articles in the *Fauji Akhbar*, and special pamphlets besides the local district village uplift newspapers.

Organized in this way, the soldiers could be collected for rallies and reunions with the least difficulty possible, and the ease of collecting them would enable us to hold rallies not merely at

central places put all over the district on suitable dates, battle anniversaries, birthdays, etc., etc.

Two objections have been raised to such an organization: one is the bogey of Fascism, which is of course nonsense as these societies will be no more likely to become Fascist than any other society, and the other is that the soldiers will be segregated instead of being a leavening influence for the whole community. This will be avoided by enlisting as many other people as possible who will join with the soldiers in the campaign of uplift. The co-operative organization has been going for nearly forty years and has bought all its experience, so that it is now well understood and well managed. Co-operative credit is still very difficult, but we do not propose to organize soldiers in credit societies. If they wish for credit, they can get it in the ordinary way. Our societies will be Better Living societies, which in many places are an unqualified success and could be made successful in every village in India given the sort of leadership which we hope the ex-soldier members and ex-soldier supervising staff will provide.

If we try to make some new form of organization, we shall have to buy all our experience from the very beginning and it may be twenty years before we learn how to organize and run it properly. Meanwhile, the mischief we are trying to avoid will be done and the soldiers will disintegrate and, instead of being pioneers of a new and better life for India, will become bad citizens and a debit and menace rather than an asset to their country.

After having been through the post-war period of the first War in a Punjab District, I am most strongly of the opinion that the organization of the ex-soldiers must be taken up at once, if we are not going to waste most of the time and trouble we are now devoting to preparing them for when they will again become villagers.

Nor must the soldiers' womenfolk be forgotten. They have missed all the modernizing influences now being brought to bear on their menfolk. Unless they are educated and trained, the

enlisted classes will continue to be a backward class in civil life. After the first War, the possibility of the soldier having daughters as well as sons to be educated was overlooked, and although splendid schools were founded for soldiers' sons nothing was done for soldiers' daughters. The V.C.O. class has been greatly handicapped thereby in comparison with the urban and middle classes, whose womenfolk usually receive at least some education. After this war, all war memorials must take the form of something for the women—education, domestic training, scholarships, medical aid, maternity aid.

II. 'UPLIFT', OR POST-WAR RECONSTRUCTION

As for the development of India, it is the professed object of the leaders of the United Nations to develop backward countries and to raise their standard of living.

India is backward and undeveloped, and has in many places a low standard of living. This is no disparagement of the work of the British in India. It is the very soundness of the foundations laid and the very greatness of what has already been done in India that have made still greater things both possible and urgently necessary. Of late years the British in India have been more concerned with political issues, with transferring authority and office, than with introducing the kind of legislation, taxation and executive action which have had such a marked effect on standards of health and well-being in their own country. And before blaming either British or Indian for what has not been done one must realize that a flat-out uplift movement must mean the tackling of many of India's most cherished ways and customs—almost as if one tried to stop football matches and close the pubs in England!

There has never been any general organized attempt to develop the country, and Lord Hailey admitted in 1927 that the so-called 'Gurgaon experiment' was the first direct attempt to raise the standard of living in rural India. That experiment was only partially copied in the Punjab and its lesson was entirely lost on most of the rest of India.

To raise the standard of living, it is necessary:

- (a) to raise the purchasing power and the taxability of the common people.
- (b) to create such a desire for a higher standard of living among them that they will eagerly do the extra work and eagerly undergo the self-denial necessary to achieve it. Such a desire is at present very rare.

(1) The raising of purchasing power and taxability.

The research work already done has amply proved that the produce of the soil can be doubled or trebled, if people will only do as we advise. What is more, with India's ever-increasing population the increase of the produce of the soil—both in quantity and quality—is an absolute necessity. Indian crops and stock yields are some of the lowest in the world—the milk yield is far the lowest! The rural industries and the business methods of the people are capable of infinite improvement. Over very large areas the terms and conditions of land tenure definitely discourage the tiller of the soil from doing his best. Too little of what comes out of the soil ever goes back into it either as capital or as manure.

The efficiency of the people is very much reduced by easily avoidable ill-health, disease and malnutrition. Vast areas of land are eroding and losing their vegetation, soil, and water reserves. Vast quantities of water run to waste in the rivers. There are vast areas where subsoil water can be used to supplement the rainfall. Vast sources of water power are neglected. Far too little labour, brains and capital are applied to the soil of India. Diseases of animals and crops are allowed a free hand. Communications are very undeveloped. Rural industries of all kinds are neglected.

(2) The standard of living and the urge to raise it.

There is among the common people a desire for certain forms of comfort and indulgence; but no such general desire for a

enlisted classes will continue to be a backward class in civil life. After the first War, the possibility of the soldier having daughters as well as sons to be educated was overlooked, and although splendid schools were founded for soldiers' sons, nothing was done for soldiers' daughters. The V.C.O. class has been greatly handicapped thereby in comparison with the urban and middle classes, whose womenfolk usually receive at least some education. After this war, all war memorials must take the form of something for the women—education, domestic training, scholarships, medical aid, maternity aid.

II. 'UPLIFT', OR POST-WAR RECONSTRUCTION

As for the development of India, it is the professed object of the leaders of the United Nations to develop backward countries and to raise their standard of living.

India is backward and undeveloped, and has in many places a low standard of living. This is no disparagement of the work of the British in India. It is the very soundness of the foundations laid and the very greatness of what has already been done in India that have made still greater things both possible and urgently necessary. Of late years the British in India have been more concerned with political issues, with transferring authority and office, than with introducing the kind of legislation, taxation and executive action which have had such a marked effect on standards of health and well-being in their own country. And before blaming either British or Indian for what has not been done one must realize that a flat-out uplift movement must mean the tackling of many of India's most cherished ways and customs—almost as if one tried to stop football matches and close the pubs in England!

There has never been any general organized attempt to develop the country, and Lord Hailey admitted in 1927 that the so-called 'Gurgaon experiment' was the first direct attempt to raise the standard of living in rural India. That experiment was only partially copied in the Punjab and its lesson was entirely lost on most of the rest of India.

To raise the standard of living, it is necessary:

- (a) to raise the purchasing power and the taxability of the common people.
- (b) to create such a desire for a higher standard of living among them that they will eagerly do the extra work and eagerly undergo the self-denial necessary to achieve it. Such a desire is at present very rare.

(1) The raising of purchasing power and taxability.

The research work already done has amply proved that the produce of the soil can be doubled or trebled, if people will only do as we advise. What is more, with India's ever-increasing population the increase of the produce of the soil—both in quantity and quality—is an absolute necessity. Indian crops and stock yields are some of the lowest in the world—the milk yield is far the lowest. The rural industries and the business methods of the people are capable of infinite improvement. Over very large areas the terms and conditions of land tenure definitely discourage the tiller of the soil from doing his best. Too little of what comes out of the soil ever goes back into it either as capital or as manure.

The efficiency of the people is very much reduced by easily avoidable ill-health, disease and malnutrition. Vast areas of land are eroding and losing their vegetation, soil, and water reserves. Vast quantities of water run to waste in the rivers. There are vast areas where subsoil water can be used to supplement the rainfall. Vast sources of water power are neglected. Far too little labour, brains and capital are applied to the soil of India. Diseases of animals and crops are allowed a free hand. Communications are very undeveloped. Rural industries of all kinds are neglected.

(2) The standard of living and the urge to raise it.

There is among the common people a desire for certain forms of comfort and indulgence; but no such general desire for a

genuinely higher standard of living as will make everyone work, work together and deny themselves to obtain and to maintain it. For instance, saving is the foundation of a higher standard of living but there is no general system of saving in India and no general desire to save. Money is spent as fast as it is earned. Good harvests mean a 'good time' and not a bit put by for the next failure of the monsoon.

By a high standard of living I mean good hygienic houses and sanitary surroundings, pure drinking water, good food, clothes, education and medical aid for both boys and girls, maternity services, culture, flowers, books, pictures, music, radios, games and recreation (NOT litigation, trinkets and expensive social ceremonies, etc., etc.)*

The common people still have the mental outlook of the days when man, beast and crop were the playthings of disease, famine and disaster, when 'eat, drink and be merry, for tomorrow we die' was a sound philosophy. Scientific and administrative control of nature is still too new to have affected the general outlook and habits of the common people.

Until there is a burning desire to achieve and maintain a higher standard of living it is extremely difficult to spread the use of better methods, and yet this psychological problem has not only never been tackled; its existence has not yet even been recognized.

To instil a desire for a higher standard of living, the following are required:—

- (i) A full campaign of publicity, using all ancient and modern, western and indigenous methods. (Publicity has in the past been usually regarded by Government as bad form if not slightly indecent, and certainly not worth spending money on.)
- (ii) Education must also be roped in. 'Education all too often regards 'uplift' as beneath its notice. Education has

* At the end of this chapter will be found a section on the standard of living entitled 'The New Order in Home and Village'.

been accused of being very unpractical, divorced from the needs and realities of India and at least partially responsible for much of our stagnation.

- (iii) Leadership must be developed among the people themselves, and they must be organized, co-operatively and in every other way possible for their betterment.
- (iv) The standard of living is largely a domestic matter and therefore in the hands of the women who run the home and bring up the children. Until their help is enlisted we shall get nowhere. India has conducted the unique, expensive and disastrous experiment of trying to spread civilization by means of 'men only'. This must cease. Girls' education must be brought up to a level with boys'. Medical aid, maternity services, Women's Institutes, domestic training and all other means of welfare and instruction must become universal.
- (v) The whole machinery of Government must be harnessed to this great objective of the welfare of the common people. All officials and public servants from the top to the bottom must be specially trained in this work, and the new spirit of helpfulness must become normal and not be sneered at as 'Missionary' or 'pi'. Any leopards who cannot change their spots must be got rid of.

Imagine the effect upon industry, employment, commerce, administration and upon the whole life of the people, etc., if the purchasing power of the people could be raised by even ten rupees per head per annum, and they could be inspired to spend this new money not on such unproductive things as silver and gold, social occasions or litigation, but on needles, scissors, quinine, mosquito nets, workshops, better tools and implements, wells, and orchards, bunds, medical aid, education, books, radios, footballs, etc., etc.

All this will cost money, but India was never before in such a strong financial position. And the cost will be a mere bagatelle compared with the grand results which will accrue in increased

happiness and well-being. The alternative is the continuance of needless human suffering and poverty, stagnation, and unconstructive and frustrated politics.

These proposals are not intended to pave the way for a military oligarchy, although the absence of any plans may easily make such a thing possible at the end of the war.

Whatever Government rules India after the war will expect to take over a business in full running order, and to find plans in such an advanced stage of readiness that the ex-soldier and his savings and all surplus war stores which are suitable may be absorbed and usefully employed in post-war reconstruction. The present Government will never be forgiven if it makes no plans to enable India to take the post-war tide at the flood. Youth craves for ideals, and one of the principal causes of the present attitude of young India is the absence of any but political ideals and the feeling that the welfare of the common people is not always the principal objective. A really comprehensive programme of economic and social betterment that kept everyone busy, body and mind, would do more than anything else to ease the solution of the constitutional problem. In the Army good welfare makes easy discipline. In civil life good welfare will make easy politics.

III. A DEVELOPMENT SCHEME

I. Objective

All-round raising of the standard of living in town and country, economic, hygienic and social—in a word, Better Homes, Better Living and Better Livelihood.

In the words of His Majesty the late King George V at Calcutta on January 6th, 1912: *'It is my wish that the homes of my Indian subjects may be brightened and their labour sweetened by the spread of knowledge, with all that follows in its train, a higher level of thought, of comfort, and of health.'*

There will be a direct and special movement for the improvement of the homes of the common people, both for its own sake,

as the home is the centre of the race and better homes are the crown of any uplift movement, and because, until the desire for better homes is implanted in the hearts of the people they will never consent to do the extra work and the saving, scraping and self-denial necessary to bring the plans of Government to fruition without an expenditure beyond the capacity of India to undertake.

The centre of the home is the housewife, and her welfare, education and training must therefore be the core of any scheme of national progress and development.

The common man prays for strong, just and efficient administration and his four freedoms are:

- (1) Freedom from debt, hunger and insecurity of crops and food
- (2) Freedom from disease and suffering
- (3) Freedom from ignorance and boredom
- (4) Freedom from faction, quarrelling, litigation and the tyranny of the petty officials.

II. The Programme

India is and probably always will be a predominantly agricultural country. Her development policy will therefore be built round the land and the people who live on it. Hitherto the land has often been neglected and far too little money, brains and labour have been applied to it.

So vast is the population that it now and probably always will be dependent on the land compared with the numbers that can be absorbed in industry even in the most ideal conditions that can be conceived, and so great are the possibilities of raising their standard of living that for a long time if not always there will be a far larger market for industrial products in the rural areas than for agricultural products in the urban and industrial areas. It will therefore be far more important to cultivate foreign markets for agricultural produce than for industrial goods.

happiness and well-being. The alternative is the continuance of needless human suffering and poverty, stagnation, and unconstructive and frustrated politics.

These proposals are not intended to pave the way for a military oligarchy, although the absence of any plans may easily make such a thing possible at the end of the war.

Whatever Government rules India after the war will expect to take over a business in full running order, and to find plans in such an advanced stage of readiness that the ex-soldier and his savings and all surplus war stores which are suitable may be absorbed and usefully employed in post-war reconstruction. The present Government will never be forgiven if it makes no plans to enable India to take the post-war tide at the flood. Youth craves for ideals, and one of the principal causes of the present attitude of young India is the absence of any but political ideals and the feeling that the welfare of the common people is not always the principal objective. A really comprehensive programme of economic and social betterment that kept everyone busy, body and mind, would do more than anything else to ease the solution of the constitutional problem. In the Army good welfare makes easy discipline. In civil life good welfare will make easy politics.

III. A DEVELOPMENT SCHEME

I. Objective

All-round raising of the standard of living in town and country, economic, hygienic and social—in a word, Better Homes, Better Living and Better Livelihood.

In the words of His Majesty the late King George V at Calcutta on January 6th, 1912: *'It is my wish that the homes of my Indian subjects may be brightened and their labour sweetened by the spread of knowledge, with all that follows in its train, a higher level of thought, of comfort, and of health.'*

There will be a direct and special movement for the improvement of the homes of the common people, both for its own sake,

as the home is the centre of the race and better homes are the crown of any uplift movement, and because, until the desire for better homes is implanted in the hearts of the people they will never consent to do the extra work and the saving, scraping and self-denial necessary to bring the plans of Government to fruition without an expenditure beyond the capacity of India to undertake.

The centre of the home is the housewife, and her welfare, education and training must therefore be the core of any scheme of national progress and development.

The common man prays for strong, just and efficient administration and his four freedoms are:

- (1) Freedom from debt, hunger and insecurity of crops and food
- (2) Freedom from disease and suffering
- (3) Freedom from ignorance and boredom
- (4) Freedom from faction, quarrelling, litigation and the tyranny of the petty officials.

II. The Programme

India is and probably always will be a predominantly agricultural country. Her development policy will therefore be built round the land and the people who live on it. Hitherto the land has often been neglected and far too little money, brains and labour have been applied to it.

So vast is the population that it now and probably always will be dependent on the land compared with the numbers that can be absorbed in industry even in the most ideal conditions that can be conceived, and so great are the possibilities of raising their standard of living that for a long time if not always there will be a far larger market for industrial products in the rural areas than for agricultural products in the urban and industrial areas. It will therefore be far more important to cultivate foreign markets for agricultural produce than for industrial goods.

1. Land.

- (a) Anti-erosion, soil conservation and reclamation, tree-planting, re-forestation, closure of hills and grazing grounds to grazing and browsing, terracing and embanking or bunding of all unlevel arable land, subsidies for all self-helping schemes of closure, reclamation and conservation. India is drying up and erosion is its biggest single cause of poverty. Until erosion is tackled the soil and water of India are wasting assets and every scheme of land development is increasingly costly to execute and maintain and gives less and less return.
- (b) Consolidation of fragmented agricultural holdings, this will increase crop production by at least 25 per cent, a sum greater than the whole land revenue now paid in areas where it is required. This work should be made self-supporting by the charging of a small cess (to be paid from the extra return consolidation of holdings will give) for several years after the completion of the work in addition to the very necessary advance payment now usually made.
- (c) Reclamation of saline (in the Punjab called *kallar* and *thur*) land with the useful help of the extra water provided by 1 (a) above.

2. Water and Power.

- (a) Canals, barrages, storage dams, hydro-electricity, tube-wells, etc., wherever possible. Most of this can be financed from loans in the ordinary way and will pay a dividend.
- (b) Improvement of water supply in existing wells, repairing wells and sinking them wherever possible. Well irrigation is the greatest insurance against famine and therefore it must pay the lowest possible taxation.
- (c) Bund building wherever desirable and possible down to small village bunds (self-helping, co-operative and contributory wherever possible).

- (d) Developments of water lifts and pumps of all kinds for every kind of water supply, temporary or permanent, and for all kinds of power, animal or mechanical.

3. Farming.

- (a) Complete replacement of inferior seed by good seed. The teaching and popularization of new and more profitable crops, better implements, better methods, such as weeding, sowing in lines, rotation, collection and preparation of manure, breeding and distribution of stud males to improve livestock, control of pests and diseases, of livestock and crops, etc.
- (b) Maximum development of all the sidelines of farming, stock breeding, dairying, fruit, poultry, bees, silk, lac, sheep, wool, mohair, etc. As far as possible, all processing of products, e.g., cheese from milk, fruit packing and canning, honey preparation, spinning and weaving will be carried out in the villages themselves.
- (c) Agricultural and other rural services will be fully financed and organized so that the farthest farm and village will be served and all farmers, craftsmen and villagers will be able to make the best use of every new development and discovery of science and experience, both for their livelihood and for their health and general welfare.
- (d) The very anti-social and wasteful crime of cattle stealing will be seriously tackled. Consolidation of holdings will make hedges and fences possible, and tattooing and registration of livestock will be developed. Better rural communications (roads, telephones, etc.), and better police organization will also help. Better arrangements for the investigation and punishment of cattle theft—special panchayats or *jirgahs* or whatever is found suitable—will be organized.
- (e) Price control of principal agricultural products to ensure a fair return to the producer. A good price is more profitable than good seed!

- (f) The farmer will be encouraged to put his heart into his work by
- (i) Consolidation of fragmented holdings.
 - (ii) Better rural services of health, sanitation and medical aid (including maternity aid and drinking water), education (including domestic training for women), radio, recreation, culture, etc.
 - (iii) Controlled prices for his produce—a fair price is better than good seed!
 - (iv) Fairer distribution of taxation. The small farmer carries more than his share of the burden and the privileged classes, *whether capitalist or agricultural, urban or rural*, carry too little.
 - (v) Credit and marketing facilities and a rural saving system.
 - (vi) Communications will be developed : roads, railways, ports, air services, posts, telegraphs, telephones, radio. Subsidize self-helping improvement of village roads. All able-bodied men will by law give (as in Turkey) twelve days' work (or pay for a substitute) to village roads and other community work (bund-building, tree-planting, etc). Rubber tyres for all bullock carts!
 - (vii) A more direct interest in the fruits of his labour by revision and control of all rights in land. Where possible the tiller himself will become the owner and other right-holders will be bought out.
- Too much of the crops goes to various non-cultivating right-holders, landlords, mortgagees, etc., and too much of the sale price of the crops goes to middlemen. This will be gradual and there will be no violent expropriation. Government will by law obtain pre-emptive rights (excluding the customary pre-emption of colla-

als] to all land that comes into the market and will obtain authority to buy up neglected and derelict estates and estates of absence and bad landlords, etc.

Land will be considered as a trust and anyone allowing it to ~~cro~~ or otherwise neglecting it or the people that live on it or not making the best use of it for agricultural purposes will be liable to have it bought at a fair price by the State, re-conditioned and leased to cultivators who, if they fulfil the conditions of good husbandry and good living, will be entitled to purchase their holdings from Government but will not be allowed to alienate except to heirs and collaterals.

Legislation aimed at keeping the land in the ownership and possession of the actual cultivator.

All these measures will soon double and then treble the produce of India's soil and create markets for everything that Indian industry can ever produce.

• **Industry—maximum possible development.**

- (a) Basic and heavy industries, capitalist and co-operative, carefully controlled to eliminate waste and ensure efficiency and proper conditions of working so that labour and the producer of the raw material may have their full share of the benefits and profits, and no one's share shall be excessive.

- (b) Consumer industries. It is recognized that many consumer goods must for one reason or another be standardized and mass-produced, but there is a large range of goods which can just as well be produced in small workshops as in big factories.

These will be encouraged to the maximum possible, rural and urban alike, and where possible will be co-operatively organized. These small workshops already flourish and will be enabled to continue to do so.

They will develop initiative and craftsmanship and will absorb the temporary or permanent surplus of agricultural labour far better and in a far healthier environment, both social and hygienic, than many large-scale capitalist enterprises.

These advantages will far outweigh the advantages of the slightly cheaper price and slightly better finish of mass-produced goods.

5. Health.

The health and medical services will be combined and expanded to reach every village and hamlet. Ambulance services will collect the serious cases in several central hospitals in each District, dispensaries will be established in key villages at suitable distances apart, there will be bi-weekly clinics in all but the smallest hamlets, and touring doctors, male and female, will visit every village. Nurses and nurses' dais will tour and some will be resident in the villages.

Sanitation, water supply, nutrition (particularly of children), dental and eye services will be fully developed in town and country alike and assisted by necessary legislation.

Co-operative medical and maternity aid societies and subsidized rural practitioners will be encouraged. Malaria, leprosy and any other diseases capable of organized attack will be vigorously dealt with.

6. Women's Welfare.

The women will be brought up level with the men in education—of their own kind, not a mere copy of men's education—and in everything else.

Domestic training will be compulsory at all stages of education; it will be given in every District, and in the villages as well as the towns. There will be women's welfare services, and co-operative Women's Institutes, maternity and medical aid, in every town and village.

The women will become equal partners with the men in this great enterprise of national development.

7. Bribery will disappear.

A genuine attempt will be made to stop the corruption and disintegration of civil life through bribery; adequate wages and prospects will be given to all public servants coming in touch with the people, whether in the village or town itself or at thanas, tahsil or other Government offices. To pay higher wages to the lower ranks of the police,* to modernize the patwari, give him proper education, training, pay and prospects and make him an uplift agency will cost lacs but will be worth crores in peace, progress and contentment.

The reform of the education system will help greatly by paying far more attention to the teaching of citizenship, a sense of responsibility and high standards of honesty and conduct. Once all the services are properly paid, a vigorous attack will be made on all takers and givers of bribes.

8. Education.

Complete reorganization of education to suit the actual needs and realities of town and village and the social and economic state of the people. Education will be so re-orientated that it will not be regarded as a means to an easy livelihood—to be fed and kept by the country—but as the road to enterprise and skilled work, to progress, better farms, villages, industries and towns, to social service and good citizenship. B.A.s and LL.B.s will be few and far between but there will be plenty of experienced craftsmen, scientists, skilled workers, engineers, chemists and doctors.

As many girls as boys to be educated; all girls to be taught domestic subjects at all stages of education and for all kinds of degrees or diplomas. All boys to be taught one or more handicrafts, etc., at all stages of all kinds of education; proper attention to health and nutrition of boys and girls at all stages of education. Special schools for soldiers' daughters, as already provided for their sons.

* This has been done in the Punjab—to the great credit of the Unionist Ministry.

They will develop initiative and craftsmanship and will absorb the temporary or permanent surplus of agricultural labour far better and in a far healthier environment, both social and hygienic, than many large-scale capitalist enterprises.

These advantages will far outweigh the advantages of the slightly cheaper price and slightly better finish of mass-produced goods.

5. Health.

The health and medical services will be combined and expanded to reach every village and hamlet. Ambulance services will collect the serious cases in several central hospitals in each District, dispensaries will be established in key villages at suitable distances apart, there will be bi-weekly clinics in all but the smallest hamlets, and touring doctors, male and female, will visit every village. Nurses and nurses' aids will tour and some will be resident in the villages.

Sanitation, water supply, nutrition (particularly of children), dental and eye services will be fully developed in town and country alike and assisted by necessary legislation.

Co-operative medical and maternity aid societies and subsidized rural practitioners will be encouraged. Malaria, leprosy and any other diseases capable of organized attack will be vigorously dealt with.

6. Women's Welfare.

The women will be brought up level with the men in education—of their own kind, not a mere copy of men's education—and in everything else.

Domestic training will be compulsory at all stages of education; it will be given in every District, and in the villages as well as the towns. There will be women's welfare services, and co-operative Women's Institutes, maternity and medical aid, in every town and village.

The women will become equal partners with the men in this great enterprise of national development.

7. Bribery will disappear.

A genuine attempt will be made to stop the corruption and disintegration of civil life through bribery; adequate wages and prospects will be given to all public servants coming in touch with the people, whether in the village or town itself or at thanas, tahsil or other Government offices. To pay higher wages to the lower ranks of the police,* to modernize the patwari, give him proper education, training, pay and prospects and make him an uplift agency will cost lacs but will be worth crores in peace, progress and contentment.

The reform of the education system will help greatly by paying far more attention to the teaching of citizenship, a sense of responsibility and high standards of honesty and conduct. Once all the services are properly paid, a vigorous attack will be made on all takers and givers of bribes.

8. Education.

Complete reorganization of education to suit the actual needs and realities of town and village and the social and economic state of the people. Education will be so re-orientated that it will not be regarded as a means to an easy livelihood—to be fed and kept by the country—but as the road to enterprise and skilled work, to progress, better farms, villages, industries and towns, to social service and good citizenship. B.A.s and LL.B.s will be few and far between but there will be plenty of experienced craftsmen, scientists, skilled workers, engineers, chemists and doctors.

As many girls as boys to be educated; all girls to be taught domestic subjects at all stages of education and for all kinds of degrees or diplomas. All boys to be taught one or more handicrafts, etc., at all stages of all kinds of education; proper attention to health and nutrition of boys and girls at all stages of education. Special schools for soldiers' daughters, as already provided for their sons.

* This has been done in the Punjab—to the great credit of the Unionist Ministry.

III. Machinery and Administration

Combined operations, that is to say, Government and people working in full co-operation and using the law in support of those items of the programme that need it, after publicity has so softened the defects of conservatism and apathy that the great majority of the people are ready for the proposed change.

For this purpose, from the Governor or Ruler and Ministers to the patwari and constable, all public servants and all non-official privileged classes and recipients of Government favours will learn and practise and preach the programme. There must be schools and courses of instruction for all grades and classes of officials and leaders. India is weak in cash; she must be rich in leadership, in service, in work, in enthusiasm and in co-operative drive.

Power will be acquired by legislation to promote the programme, e.g. to stop erosion, to grow trees for fuel and timber, to improve conditions of land tenure, labour, etc., to ensure sanitation of towns and villages, to enable a clear majority in any town or village to carry out work for its development or improvement without obstruction from minorities. All able-bodied men will have to give six days twice a year (or pay for a substitute) for community work on roads, bunds, drains, soil conservation, etc.

These powers will not be applied suddenly or harshly. They will be used in conjunction with the training and publicity described elsewhere so that there will be the maximum of willing co-operation and the minimum of compulsion.

A proper development of publicity services, both to 'sell' the development programme to the public and to provide good rural news and entertainment and uplift services, etc.

For example:

- (a) A village weekly picture paper
- (b) A touring cinema in each tahsil
- (c) First-class radio programmes suitable for village needs, organization of the manufacture and servicing of cheap radio sets within the means of villagers to buy

- (d) Touring dramatic shows
- (e) Rural shows, *melas*, tournaments and competitions
- (f) Gramophone records, songs, glee parties, posters, pictures, and all other ancient and modern, eastern and western, methods of publicity and popular instruction
- (g) A service of village guides to bring the programme to every village and hamlet and to link the villages with every department of Government.

Every area must have its detailed plan to suit local needs and possibilities—province, Division, District down to tahsil, taluk and even village—and every leader and public servant serving in each area will know and work to his blue-print.

All measures possible to enlist public support will be taken, such as:

1. Full development of the co-operative organization for every good purpose, such as financing agriculture and small-scale industries, marketing, purchase of raw material, seed and implements, livestock breeding, fruit, honey, vegetables, silk, poultry, cattle, dairying, anti-erosion work, better living, health, medical and maternity aid, recreation (including reading-rooms, radio, etc.,) and all other activities.*

Self-help and co-operation will be the guiding principles. Nothing will be provided free—every benefit will be contributory to the largest extent possible, in cash and labour. Only the destitute will pay nothing, and every effort will be made to put them on their feet again. As far as possible every activity will be co-operatively organized. Villages will be governed by panchayats.

2. Youth will be organized and trained. Boy Scouts, Girl Guides, youth clubs of all sorts and for all purposes in towns and villages alike. All school and college students will attend youth camps where useful work will be done, citizenship and crafts taught and recreation encouraged.

The Army. The Indian soldier will be the spearhead of the great attack on the standard of living. After the war he will,

* See p. 258.

with as many of his neighbours as are ready to join, be co-operatively organized in his town or village for every good purpose. He will be given all the training possible both before and after demobilization so that either as a farmer or craftsman or as a servant of Government, either to assist in making and executing its plans or as a teacher and demonstrator of the new way of life in the village itself, he may be as useful to his country in peace as he was in war. The maximum possible use will be made of the ex-officer and ex-soldier for all kinds of employment and service.

The Government machine will be tuned up and harnessed to the great enterprise, by such means as:

Proper co-ordination of all departmental work at all levels—at provincial headquarters, in Divisions, in Districts, and in villages. All departments to preach and practise each other's programme of betterment, to help each other and to work together under one central direction at provincial headquarters and everywhere else. This is far from being the case at present. Not only do departments often not co-operate with each other but they sometimes work against each other; and much efficiency is lost and development retarded by lack of co-ordination between departments.

Re-organization of District work to enable District officers to pay proper attention to welfare and development, and to tour the villages.

All the many departmental schemes awaiting funds must be carried out. They are trotted out every budget time and put back again for want of money. Maximum development of departmental activities for the improvement of life and livelihood.

There must be ample provision of money, staff and facilities for research in every branch of life, agriculture, industry, health, domestic life, etc.

Cost and Finance. Money cannot be spent very quickly at first and it will take time to get things really going. The framework of Government has been so attenuated in the past, the staff so reduced and the social services so starved that it will take

several years to make the plans, collect equipment and material, build up and train the necessary staff; and the fullest use possible must be made of all ranks of the Army, the moment they become available, to recruit the necessary staff for the expansion of the administrative machine.

The revenues of the provincial governments are too inelastic for them to pay the whole cost. If, therefore, the Central Government cannot find the whole amount as a gift, then a loan without interest of whatever proportion, it cannot make a present of, is suggested, in the hope that the prosperity induced by the programme of development will enable the province to repay it at some future date. Capital outlay of a remunerative kind might be financed by loans in the ordinary way. One great stimulus to provincial development would be the return by the Central Government to the provinces of all money paid by way of income-tax and import duties on development schemes.

The expenditure by the Central Government on central services, ports, railways, radio, posts, telegraph, telephones, arterial roads, air services, etc., is of course quite separate from the provincial estimates.

Perhaps a sum equal to three or four years' revenue would suffice for the first eight or ten years' work. As a matter of fact, India is better off now than she ever has been before. The Government of India has paid off its sterling debt and has a huge credit in London, the provincial governments have surpluses they cannot spend, all taxes and revenues are coming in as never before. Industrialists, craftsmen, farmers, merchants have never been so well off. The soldier will have his deferred pay, furlough pay and any money he has saved at the end of the war, and the Army has its Welfare Fund being built up for the very purpose of helping the demobilized soldier to make good as a citizen. India will never again have such a chance of making and carrying out plans of large-scale development. The Army Reconstruction Fund is of course quite separate from these central and provincial development funds. It will merely ensure

that the ex-soldier will be able to play his part in whatever is done to raise the general standard of living.

How soon special finance will cease to be necessary and the movement become self-supporting depends upon the drive and the momentum achieved and these depend upon the inspiration and the leadership put into the work by Government, its officials and the non-official leaders. If the enthusiasm of the common people, particularly of course of the younger generation, can be fired, the speed will be accelerated and the cost will obviously be greatly reduced by free labour and services, by fees and contributions, by the spending of the people's own money and savings and by the share of the new wealth created which Government can take as taxation. No one can even guess what could be achieved by an all-out drive for the welfare of the common people by a Government and a body of officials who really believed in what they said and did, and by putting ideals, other than merely political, before the youth of the country and before an intelligent and active peasant soldiery returning from war with money in their pockets. But we know too well from previous experience what will happen if we sit with folded hands and leave the future to itself.

This scheme of course is pump-priming. Is it justified? What will happen when the money is exhausted? Perhaps there will be more forthcoming. Perhaps the money may never be exhausted; much of the work will strengthen central and provincial resources, and a period of intensive productive development may enable money to be found locally; the soldier will be invited to invest his savings in self-improvement of all kinds; all schemes will be self-helping and contributory; doles and almsgiving will be kept down to the absolute minimum; five or ten years of increasing well-being may change the whole mentality of the people and the money now spent by both Government and the people in keeping and in breaking the peace, in litigation, in friction, frustration, waste and extravagance of various kinds may be diverted to development and social improvement.

No one can say what will be the result of a period of intensive beneficent administration with popular co-operation, but we may safely say that at the worst the ex-soldier will be five or ten years older at the end of it and things will at least be far better than if we had merely spent our resources during this period in trying to maintain law and order and leaving the soldiery to shift for themselves; and at any rate there will be far more chance of repaying a productive loan than money spent merely on waging war.

Short-term Plan. There is bound to be a gap between the end of the war and the time when large-scale planning begins to benefit the common man. This gap must be filled by a general uplift drive—better seed, consolidation of holdings, manure pits, anti-erosion work, co-operative enterprise, cottage industries, ventilators, chimneys, improved wells, the growing of protective foods, domestic training and welfare work for women, youth movement, organized recreation—all the little things which cost so little but mean so much in improved health, wealth and well-being.

This programme will serve to keep everyone happily and profitably busy till the big plans mature and will do more than anything else to keep the people together, to prevent the reaction and disillusionment that is so likely to follow the relaxation of the strain and effort of war, to prevent the ex-soldiers drifting apart, frittering away their savings, and forgetting their comradeship, loyalty and discipline, and it will convince everyone of the good-will of Government and of course its desire and capacity to win the peace as well as the war.

Conclusion. It is only the provision of adequate money for his equipment and welfare which has enabled the Indian soldier to use his magnificent qualities for the winning of the war. The provision of a mere fraction of this money for a carefully planned and executed programme of national development will enable him to divert these qualities to winning the peace, and to become the spearhead of a great advance in culture and civilization. The

measure of our plans must be not our bank balance but our needs. Money must not be our master but our servant, for winning the peace just as it is for winning the war.

But there is no time to lose. This great opportunity will never come again. Plans and preparations cannot be made in a day. If they are not ready, and already in execution when the enemy finally collapses, we shall go into a flat spin, and having won the war we shall have every chance of losing the peace. India's soldiers are fighting for the United Nations and our difficulties are not due to any fault of ours. But that is no excuse for doing nothing. Our Allies are all making plans for post-war reconstruction. Let us do likewise and win the peace together as we are winning the war together.

By the date of the Armistice, Government's plans must be so advanced that it can begin at once preliminary teaching and training of the serving soldiers. By the date demobilization starts Government must be ready immediately to absorb and to use all the surplus men, stores, equipment and material that it wants for its programme of reconstruction; while plans and schemes must be so far advanced that those men and materials which the Army does not want shall not be idle or frittered away but will find profitable occupation and be used in co-operating with Government's plans. A hiatus after the fighting is over while Government makes up its mind what to do next will be fatal. Whatever Government is in power or comes into power is entitled to find complete plans ready to hand, which it can adopt or modify to suit its policy.

Little of this programme—either short- or long term—is experimental. It has most of it been tried out and proved right in many places and is only awaiting such an opportunity as the present to be put over on an all-India scale.

By keeping everyone busy, happy and organized this programme will, in conjunction with the tuning of the Government machine, eliminate strife, litigation, crime and political frustration and the loss of productive capital on waste and extravagance

of all kinds, thereby greatly increasing the wealth, health and well-being and happiness of the people.

Who knows but what, when everyone, particularly the younger generation, is flat out, using their brains, their labour, their savings, land or other resources to capacity for their own good and for the good of their neighbour and the State, and when Government and people are working whole-heartedly together for their own and each other's good, that an unending boom era of prosperity and health and happiness will start.

The V sign must stand for Vision and Vigour as well as for Victory. No piecemeal plans will help us, nothing but a full flat-out programme will create the momentum which will lift India's standard of living.

IV. THE NEW ORDER IN HOME AND VILLAGE

This is the picture of the home and village which our plans are designed to produce.

The village has been 'consolidated', that is to say, the scattered fields of each man's holding have been put together; and so the fields are large, and many of them are fenced; all sloping fields have been terraced and embanked. All water above and below the ground that can be made available is used. The people grow the best crops that land and water allow; the water compartments in the fields are small and water is nowhere wasted. Whenever possible everyone grows at least some fruit and vegetables for his home, there are good implements and good cattle to be seen, none but 'approved' stud-bulls are used, the roads are straight, raised above the level of the fields, passable at all times to wheeled traffic and connected with the nearest metalled roads. The bigger farmers live in pleasant farmsteads on their land. All carts are rubber-tired, on mass-produced wheels and axles attached to the existing cart bodies.

Round the village itself there are no unnecessary ponds, pits or holes to breed mosquitoes; earth for house repairs comes from

specially selected places,* not from promiscuous diggings anywhere and everywhere. Few, if any, dung-cakes are made; corn is ground by bullock-power and not by women-power; rubbish is removed to properly dug rows of pits, in wheel-barrows and not in baskets carried on heads; there are simple but decent latrine arrangements; many of the streets are paved and drained; well-tops are properly constructed and the water is drained away to little gardens; there is a good purdah washing place on the wells for women to wash themselves, their clothes and their children.

The cattle drink from troughs at the well or from a good tank which is filled from the canal or from the jungle but not dirty rainwater and drains from the *abadi*. There is a 'footbath' of cement concrete which is filled with foot-wash when foot-and-mouth disease appears in the neighbourhood and all cattle are driven through it twice a day. There are organized games, and a recreation room with a small library and some periodicals and good books, both of general interest; and there is a community radio set. There are co-operative societies of many kinds (including recreation, marketing, a store for improved seeds and implements and some cottage industries) and a Branch Post Office. A panchayat administers the village; by a co-operative or other organization, medical aid, maternity aid and the services of a trained nurse and dai are secured. There are trees in the open spaces and a general air of brightness and cleanliness.

Coming to the homes, we find they are light and airy, with pictures on the walls as well as other forms of decoration; the walls, beams and atmosphere are not black with smoke. The fire-place is of an improved kind on which several pots can stand, and which does not waste so much fuel as the ordinary *chula*. Every fire-place has a chimney, while milk and other things are kept hot in hay-boxes, not over a slow fire of cow-dung. The yard outside is clean and tidy. And there is a patch or two of

* These places are usually the ponds which are kept dry, turn and turn about, for this purpose. See p. 41.

vegetables and flowers, while if there is room there are some trees, preferably fruit trees or perhaps a grape-vine or a papaya. The children are clean, neat, disciplined, healthy and happy; boys and girls go to school; their ears are not drilled with holes; none of them wear any ornaments. Helped by the fruit and vegetables her goodman grows, the goodwife is able to cook a good balanced diet, she makes and mends the clothes; she knits woollies, she keeps a few simple medicines; she can read and write and has several books by her, both upon domestic subjects and upon subjects of general interest for herself and her children; she is a member of a co-operative Women's Institute, her clothes are home made, her ornaments are simple and they are within her means. Her goodman takes an interest in his home and his farm and is never idle; there is always something to be done to improve home, farm or village. He is a member of several co-operative societies for the provision of his various needs and the marketing of his crops and he has some profitable hobby or sideline for his spare time and his children give him what help they can with it. He takes a keen interest, both for himself and his children, in village games and in any other community effort that is going on for the entertainment or improvement of his village; he has a savings bank account, or banks with a co-operative Credit Society. His whole family is vaccinated and re-vaccinated at the proper time and they all use mosquito-nets, and naturally quinine is among the medicines stocked by his wife.

I defy anyone to say that this is a fantastic or an impossible picture. Most of it is to be found somewhere or other in our villages, although nowhere is it yet all together in one home or village. This is what is meant by a high standard of living and this is what is meant by rural reconstruction. Can it be bettered? And can we accept anything less? This is what I mean when I say we must plan and fight to win the peace.

APPENDIX I

LIST OF BULLETINS, LEAFLETS AND PAMPHLETS

List of rural reconstruction bulletins, leaflets and pamphlets, available free from the Director, Rural Reconstruction, Punjab, 14, Queen's Road, Lahore, in English, Urdu, Roman Urdu, Hindi and Gurmukhi.

I.—Bulletins.

1. Pits.
2. Light and air.
3. Vaccination.
4. Save your cattle from contagious diseases.
5. Children's ornaments.
6. Village games.
7. Girls' education.
8. Stud bulls.
9. Sowing cotton in lines.
10. Care of eyes.
11. Improved seeds.
12. Saving and spending.
13. Eradication of smut—one anna in every rupee.
14. Top-borer and phyrilla.
15. Drink pure water.
16. Hay-box.
17. *Watbandi*-work is the mother of crops.
18. Co-operation.
20. Silage.
21. Hay-box, ghee making.
22. Canal water I.
23. Ten Commandments for the cure of eyes.
24. Canal water II.
25. Midday meals.
26. New plaster for weather proofing *kachcha* walls and roofs.
27. The villagers' Ten Commandments.
28. Domestic Bulletins—I. Milk.

II.—Leaflets and Pamphlets.

1. Village life and how to improve it.
2. Rural reconstruction programme.
3. Home sweet home.
4. District shows (English only).
5. Soil erosion.
6. Note on erosion and reclamation in the Hoshiarpur *Siwaliks*.
7. Soil erosion—and outline for practical teaching in school (English and Urdu only).
8. Punjab canals.
9. Stump planting.
10. The Silver egg.
11. Kangra Forest Societies.
12. *Aurat-ki-aurat-se-baten* (Woman to woman) (Urdu only).
13. *Kamyabi-ka-raz* (Urdu only).
14. House plans (English and Urdu only).
15. Information Bulletins, District by District, except Simla.
16. *Dehali Geet* (Text of gramophone songs) (Urdu only).
17. Mr Stewart's address to Rotary Club (English, Urdu and Gurmukhi only).
18. Rural reconstruction basic principles (English and Urdu only).

APPENDIX II

SOME HANDY BOOKS FOR RURAL WORKERS

1. *The Science of Health*. By H. E. H. Pratt and Dr. Ruth Young, M.B.E.

An illustrated textbook of Physiology, Hygiene and First Aid for Indian schools, with or without a final chapter on sex instruction. 14-chapter edition, 15-chapter edition, Re. 1-2 each.

'This little book admirably meets the need of Indian students. We can strongly recommend it.'—*Teaching*.

2. *Wisdom and Waste in the Punjab Village*. By M. L. Darling, C.I.E., I.C.S. Rs. 9.

3. *Village Readers*

Primer	20 pp. 2½ As.	Reader III A	64 pp. 5½ As.
Reader I	30 pp. 3 As.	Reader III B	64 pp. 6 As.
Reader II A	42 pp. 3½ As.	Reader IV A	78 pp. 7 As.
Reader II B	66 pp. 4½ As.	Reader IV B	84 pp. 7 As.

Enlarged and combined edition:

Primer	74 pp. 5½ As.	Reader III	108 pp. 8 As.
Reader I	70 pp. 6 As.	Reader IV	128 pp. 10 As.
Reader II	86 pp. 7 As.	Reader V	136 pp. 11 As.

These readers embody Mr Brayne's ideas, and have been planned and executed by the Rev. W. M. Ryburn, Principal, Christian High School, Kharar, conjointly with Mr Brayne.

4. *Socrates in an Indian Village*.

Library edition, Rs. 3-8; cheap edition adapted for schools, Re. 1-6. Roman Urdu, Re. 1-8. Also available in English in five pamphlets, 32 pp., 4 As. each and in Urdu script, five pamphlets, 5 As. each.

5. *Socrates Persists in India*. English, Re. 1-4. Roman Urdu, Re. 1-12.

6. *Socrates at School*, Re. 1-2. Roman Urdu, 8 As.

7. *In Him was Light*, Re. 1-4. Urdu, Re. 1-8. Hindi, Re. 1-4.

A book of dialogues for Indian Christian villagers.

Nos. 4—7 are all by F. L. Brayne, C.I.E., M.C., I.C.S. No. 6 had the collaboration of the Rev. W. M. Ryburn.

8. *Education and Village Improvement*. By I. W. Moomaw. English, Rs. 2-12. Urdu, Re. 1-12.

7. A book on rural uplift which serves as a practical handbook. Careful instructions and detailed projects are supplied for animal husbandry, poultry farming, etc. It aims at village improvement through education.

9. *Indian Village Health*. By J. N. Norman-Walker. Rs. 2-8.

The author writes for all those interested in Indian Village Health. Only the more important diseases are dealt with and the steps necessary for control outlined. This book was published with the support of the Indian Village Welfare Association; other useful publications of this Association written by C. F. Strickland, C.I.E., are:

10. *Rural Welfare in India*. 10 As.

11. *Consolidation of agricultural holdings*. 6d.

12. *Quinine and Malaria in India*. 6d.

The above books (Nos. 1—12) are published by the Oxford University Press.

13. *The Boy Scout in the Village*. Published by Uttar Chand Kapur & Sons, Lahore. English, Re. 1. Urdu, 12 As.

14. *The Village Dynamo*. Published by R. S. Munshi Gulab Singh & Sons, Lahore. English and Urdu, 4 As. each.

15. *Lecture Notes on Rural Reconstruction*. Published by the Feroze Printing Press, Lahore. English, 3 As. Urdu, 2 As.

Nos. 13—15 are by F. L. Brayne, C.I.E., M.C., I.C.S. These books can be had from the office of the Director, Rural Reconstruction, Punjab, 14, Queen's Road, Lahore.

16. *The Psychology of a Suppressed People*. By J. C. Heinrich. Cloth, Rs. 4-1, Boards, Rs. 2-13-6. Published by George Allen & Unwin, Ltd.

APPENDIX III

LIST OF MAGIC LANTERN SLIDES

The slides are obtainable from the Director, Rural Reconstruction, Punjab, 14, Queen's Road, Lahore (prices and lecture notes on application).

				No. of Slides
1.	Agriculture:			
	(a)	Implements	...	3
	(b)	Good crops	...	4
	(c)	Better farming	...	9
	(d)	Poultry farming	...	81
	(e)	Bee keeping	...	52
	(f)	Pests	...	2
2.	Consolidation of holdings			26
3.	Erosion and afforestation			148
4.	Cottage Industries:			
	(a)	Wool processing, Government Industrial School, Hissar	...	22
	(b)	Weaving	...	11
	(c)	Other cottage industries	...	52
5.	Animal Husbandry:			
	(a)	Cattle	...	37
	(b)	Sheep	...	20
	(c)	Goats	...	8
	(d)	Mules	...	3
6.	Health and Cleanliness:			
	(a)	Light, air and cleanliness, etc.	...	332
	(b)	Diseases	...	30
	(c)	Cow-dung cakes	...	12
	(d)	Drains	...	4
	(e)	Village pond for cattle	...	2
	(f)	Dual pond system in Ingram-Skinner Estate	...	2
	(g)	Manure pits in Ingram-Skinner Estate	...	4
7.	Women's Welfare Work:			
	(a)	Chimneys	...	3

APPENDIX IV

295

(b)	Home craft	...	...	...	6
(c)	Hay-box	...	...	...	12
(d)	Other amenities	...	...	...	177
8.	Boy Scouts	...	...	...	39
9.	Village Evils (drink, fighting and litigation)	...	...	...	56
10.	Miscellaneous	...	...	...	76

APPENDIX IV

LIST OF GRAMOPHONE RECORDS

H. M. V. Dehat Sudhar and War gramophone records in Punjabi and Urdu, obtainable at concessional prices through the Director, Rural Reconstruction, 14, Queen's Road, Lahore.

<i>Q. C. No.</i>	<i>Name of Record</i>	<i>Language</i>
101	Subah Suhani chirian (good seed) ...	Urdu
	Bhai kisano (cleanliness) ...	
102	Jatta apne mal ton (thrift) ...	Punjabi
	" " " " " "	
103	Ki kuj khol sunawan (social ceremonies) ...	Punjabi
	Khetan walia (better farming) ...	
104	Ham sab hain bhai bhai (unity and co-operative effort) ...	Urdu
	Rab sachā farmawe (give up litigation) ...	Punjabi
105	Uth ghafiat de matwalia (wake up from lethargy) ...	Punjabi
	Rakh ilm de nal piyar (girls' education) ...	
106	Hosh kar (drink evil) ...	Urdu
	Ae zamindaro kaho (awake from apathy) ...	
107	Tu hai izzat dar (self-respect) ...	Urdu
	Tammana hai ke debat-i-watan ki (better living) ...	
108	Putan dhian nun ilm parha (education and co-education) ...	Punjabi
	Tusi sunon (factions)... ..	

Q. C. No.	Name of Record	Language
109	Chhad jatta nind piari (awakening) ...	Punjabi
	Mushaqqat ki zillat (hard work)...	Urdu
110	Sun' ae bhai kisan tu (self-respect) ...	Urdu
	Ilm daulat hai (education) ...	Urdu
111	Kharch karna ho to (saving and thrift) ...	Urdu
	Nahin karte kheti men (better farming) ...	Urdu
112	Mere karam gae hain phut (women welfare)	Urdu
	Be koshisho be jehad (self-help) ...	Urdu
113	Dam daman ni jugni (thrift and girls' education) ...	Punjabi
	Jaman amban bagh sohaya (fruit growing) ...	Punjabi
114	Lagge quarza aje wi piara (unproductive loans)	Punjabi
	Ilm bajh na khaliq milda (education) ...	Punjabi
115	Ban marde maidan (self-respect)...	Urdu
	Bashar ko lazim hai (hardwork and industry)	Urdu
116	Putan dhian nun ilm parha (education for boys and girls) ...	Punjabi
	Jatti jor ke hath (consolidation of holdings)...	Punjabi
117	Sardar zaminan baghan da (borrowing) ...	Punjabi
	Bachhon ki talim (primary education) ...	Punjabi
118	Sohniyan jogan wala (better farming and better cattle) ...	Punjabi
	Jindri nah rol jatta (blood feuds and factions)	Punjabi
119	Tun buryan ih rasman (evil customs) ...	Punjabi
	Jatta dunya jagdi (awakening) ...	Punjabi
120	Piyare nah kar sada shikar (preservation of wild life) ...	Punjabi
	Parha lo (girls' education) ...	Punjabi
121	Baba man ki ankhen khol (bad living) ...	Urdu
	Lang a ja patan china da (better living) ...	Punjabi
122	Uth jag ghorare mar nahin (shake off lethargy)	Punjabi
	Rab di rahmat jano (education) ...	Punjabi

Q. C. No.	Name of Record	Language
123	Mera pjara mahi (romance of village life) ...	Punjabi
	Hai tere dam se zamindar (farmer's place in society) ...	Urdu
124	Kar fikar kisan ab dhan ka (village economy)	Punjabi
	Parha lo chhoryan ne (girls' education) ...	
125	Kisi par jaur o tashadad rava nahin hargiz (preservation of wild life) ...	Urdu
	Chithie dard wandawan waliye (uplift) ...	Punjabi
126	Himat hai nam tera (girls' and boys' education)	Urdu
	Yeh teri zindgi hai (farmers' life) ...	
127	Dhor dangran te zulam kamaye nah (protection of cattle) ...	Punjabi
	Gal sun ja yar ayali (cattle breeding) ...	
128	Kar hosh tun ratti raval kure (cleanliness) ...	Punjabi
	Mahia sade wehre a (cleanliness) ...	
129	Raj raj ke kha mahia (better farming)	Punjabi
	Asi jat kisan kamere ji (good crops) ...	
130	Ni men parhai hoie (girls' education)	Punjabi
	Uth chal askool nun (education) ...	
131	Uth jatta ji nahin hari da (education and thrift)	Punjabi
	Qarz de rah tun nah jain (debt) ..	
132	Lakhe da ban gia kakh loko (evil customs) ...	Punjabi
	Bahu dhol da damakha (education) ...	Pahari
133	Shala jawanian mane (uplift message) ...	Punjabi
	Jeuna dusre de asra (mutual help and education) ...	
134	Sare dukhre ilm talesi (blessings of knowledge)	Punjabi
	Je was lagda ie karaz nah cha (curse of debt)	
135	Darya de us par (message of uplift and mutual help) ...	Urdu
	Chhor di ham nen purani reet (condition of a village after uplift) ...	

Q. C. No.	Name of Record	Language
136	{ Do dehati hassde jawan (village after uplift) Paili de banne beh ke (education and thrift)	Punjabi
137	{ Ae mere nowjawan (join the army) ... Aao kar lo nazzare (uplift message) ...	Urdu
138	{ Men koil wangar kyon nah rowan (early marriage) Nale hoon kar ke nale han karke (consolidation)	Punjabi
139	{ Apne wehre wich kiari banawan ge (sowing of flowers) Nikyan balan nun toon nah wayah (early marriage)	Punjabi
140	{ Hun rab ne doawan sunian ne (condition of a village after uplift) Uche shimle te bankian ghorian (litigation) ...	Punjabi
141	{ Phatu ne dhum machai (evil customs) ... A we dipty á (panchayats)	Punjabi
142	{ Bharti fauj wich hona (join the army) ... Uth wela ae mard maidani da (co-operation and effort for victory)	Punjabi
143	{ Uth jag channan (join the army and save the country) Hai mulk nun sadi lor (join the army) ...	Punjabi
144	{ Jit loge maidan (join the army) Kadi hoon karke kadi han karke (consolidation)	Punjabi
145	{ Chup chup we dholna (morality and thrift) Chal change chale we (uplift message) ...	Punjabi
146	{ Jind suli utte chahr ke (debt) Tusi suno punjab de wasio (debt and evil customs)	Punjabi
147	{ Speech of Brig. F. L. Brayne	Urdu
148	{ Jhuti khabron pe (be brave) Zindgi hai an se (a message for warriors) ...	Urdu

S. C. No.	Name of Record	Language
149	{ Ham des bachaenge (war song) ... Aj kahan bharat men hai (war song) ...	Urdu
150	{ Panjabi nowjawan (war song) ... Aa sajan (war song) ...	Punjabi
151	{ Apas ki chhor nafrat (co-operation) ... Hosh kar hosh kar (gambling) ...	Urdu
152	{ Dhal mera we (education and thrift) ... Kar lai pind sudhar (uplift message) ...	Punjabi
153	{ Panchan wich parmeshawarhunda (panchayats) Main vi bhulan tun vi bhulen (litigation) ...	Punjabi
154	{ Sab se bari izzat hai (high position of farmer) Kuchh to samajh le man men (debt and evil customs) ...	Urdu
155	{ Tatyera jee hun kirona (fighting and quarrelling) Mundian nun ghal de school (education) ...	Punjabi
156	{ Sanu terian tangan lagian (awake!) ... Dassi kaun jitya (litigation) ...	Punjabi
157	{ Bannian ton lar ke (join the army) ... Sunyarian de ja mahia (wearing ornaments)	Punjabi
158	{ Noujawanon tumhein ab jang (join the army) Tu kaun si ghaflat men hai (join the army) ..	Urdu
159	{ Tu hai izzat dar (uplift message) ... Qarza ki tujh se dehqan (education and debt)	Urdu
160	{ Aan bachao des (defend your country) ... Ab waqt hai (defend your country) ...	Urdu
161	{ Lokee jangan wich larde (do not trust false news) ... Panjab da tou sarmaya ain (join the army)	Punjabi
162	{ Bantur fauji a sipahi (join the army) ... Shala jug jug pawe gehne (mother's prayer for her fighting son) ...	Punjabi

Q. C. No.	Name of Record	Language
136	{ Do dehati hassde jawan (village after uplift) Pailli de banne beh ke (education and thrift)	{ Punjabi
137	{ Ae mere nowjawan (join the army) ... Aao kar lo nazzare (uplift message) ...	{ Urdu
138	{ Men koil wanger kyon nah rowan (early marriage) Nale hoon kar ke nale han karke (consolidation)	{ Punjabi
139	{ Apne wehre wich kiari banawan ge (sowing of flowers) Nikyan balan nun toon nah wayah (early marriage)	{ Punjabi
140	{ Hun rab ne doawan sunian ne (condition of a village after uplift) Uche shimle te bankian ghorian (litigation) ...	{ Punjabi
141	{ Phatu ne dhum machai (evil customs) A we dipty á (panchayats)	{ Punjabi
142	{ Bharti fauj wich hona (join the army) Uth wela ae mard maidani da (co-operation and effort for victory)	{ Punjabi
143	{ Uth jag channan (join the army and save the country) Hai mulk nun sadi lor (join the army) ...	{ Punjabi
144	{ Jit loge maidan (join the army) Kadi hoon karke kadi han karke (consolidation)	{ Punjabi
145	{ Chup chup we dholna (morality and thrift) Chal change chale we (uplift message) ...	{ Punjabi
146	{ Jind suli utte chahr ke (debt) Tusi suno punjab de wasio (debt and evil customs)	{ Punjabi
147	{ Speech of Brig. F. L. Brayne	{ Urdu
148	{ Jhuti khabron pe (be brave) Zindgi hai an se (a message for warriors) ...	{ Urdu

Q. C. No. .	Name of Record	Language
149	{ Ham des bachaenge (war song)	{ Urdu
	{ Aj kahan Bharat men hai (war song) ..	{ Urdu
150	{ Panjabi nowjawan (war song)	{ Punjabi
	{ Aa sajan (war song)	{ Punjabi
151	{ Apas ki chhor nafarat (co-operation) ...	{ Urdu
	{ Hosh kar hosh kar (gambling)	{ Urdu
152	{ Dhal mera we (education and thrift) ...	{ Punjabi
	{ Kar lai pind sudhar (uplift message) ...	{ Punjabi
153	{ Panchan wich pameshawarhunda (panchayats)	{ Punjabi
	{ Main vi bhulan tun vi bhulen (litigation) ...	{ Punjabi
154	{ Sab se bari izzat hai (high position of farmer)	{ Urdu
	{ Kuchh to samajh le man men (debt and evil	{ Urdu
	{ customs)	{ Urdu
155	{ Tatyera jia hun kirona (fighting and quarrelling)	{ Punjabi
	{ Mundian nun ghal de school (education) ...	{ Punjabi
156	{ Sanu terian tangan lagian (awake!) ...	{ Punjabi
	{ Dassi kaun jitya (litigation)	{ Punjabi
157	{ Bannian ton lar ke (join the army) ...	{ Punjabi
	{ Sunyarian de ja mahia (wearing ornaments)	{ Punjabi
158	{ Noujawanon tumhein ab jang (join the army)	{ Urdu
	{ Tu kaun si ghaflat men hai (join the army) ...	{ Urdu
159	{ Tu hai izzat dar (uplift message) ..	{ Urdu
	{ Qarza ki tujh se dehqan (education and debt)	{ Urdu
160	{ Aan bachao des (defend your country) ...	{ Urdu
	{ Ab waqt hai (defend your country) ...	{ Urdu
161	{ Lokee jagan wich larde (do not trust false	{ Punjabi
	{ news)	{ Punjabi
	{ Panjab da touz sarmaya ain (join the army)	{ Punjabi
162	{ Bantur fauji a sipahi (join the army) ...	{ Punjabi
	{ Shala jug jug pawe gehne (mother's prayer	{ Punjabi
	{ for her fighting son)	{ Punjabi

Q. C. No.	Name of Record	Language
163	Wehlian phirn khawari (awake!)... Jur ke wah kankan (better farming) ...	Punjabi
164	Bulhe nun samjhawan aian (trained dais) ... Tenun ghafala jag nah ie (awake!) ...	

APPENDIX V

LIST OF RURAL RECONSTRUCTION MODELS

Models can be ordered through the Director, Rural Reconstruction, Punjab, 14, Queen's Road, Lahore. (Prices etc., on application.)

1. Village models (good and bad) portable. Packed in two wooden boxes $2' \times 3'$ with explanatory cloth banners (English and Urdu).
2. Village well-top with arrangement for disposal of waste water portable $2' \times 2' \times 1'$ with explanatory cloth banner (English and Urdu).
3. Purdah washing place for women.
4. Model of village school, portable, packed in box $2' \times 3'$.
5. Miniature wall ventilator fitted with wire gauze or sparrow wire, $2' 1'' \times 1' 3'' \times 7''$ showing how ventilator is fixed in wall.
6. Ventilator $2\frac{1}{2}' \times 1'$.
7. Ventilator of reinforced concrete.
8. Galvanized iron roof ventilator.
9. Glazed window for well-to-do zamindar.
10. Wooden model of bored hole latrine, quail pit latrine and pit latrine detachable.
11. Cement concrete slab for bored hole latrine (full size).
12. Model of double pond system $2' \times 1' 4'' \times 4''$ showing a suggested way of using the pond area both for water and for obtaining building clay and so avoiding promiscuous digging all around the village.
13. Box for exhibiting seed samples, suitable for touring officers $1' 5'' \times 10\frac{1}{2}'' \times 3''$.

14. Wooden sample of a 'U' shaped drain brick $10'' \times 5'' \times 3''$.
15. Maps of consolidation of holdings $9' \times 10\frac{1}{2}'$ with trees, wells, etc.
16. Twenty Udu slogans on canvas ($3' \times 2\frac{1}{2}'$).
17. Ten charts on canvas of ten commandments.
18. Wheel barrow.
19. Model of a village before consolidation and after consolidation $2' \times 3'$.
20. Model of a good and a bad house $1' 9'' \times 2' 9''$.
21. Model of cattle (good bull, bad bull, Hariana breed, Montgomery cow, Montgomery bull, Dhanni bull, buffalo bull).
22. Models of erosion and counter erosion.
24. Model of aqua privy type of latrine.

INDEX

- Accuracy in rural work, 250
 Agriculture, Royal Commission on, 19, 252
 Ambition for higher standard of living, 1, 5, 7, 16, 19, 27n, 122, 165, 225
 Ambulance, 113n, 278
 Apathy, 3, 4, 88, 280
 Arbitration Society (co-operative), 163, 234n
 Armistice Day, 255, 265, 286
 Artisans, 25, 161
 Back to nature, 105, 107
 Banks (*daubandi, waibandi*), 24, 58, 66, 79, 83, 93, 274, 283, 287
 Barter, 121, 222, 224
 Bees, 243, 275
 Better Living societies (co-operative), 149n, 155, 266, 267, 281
 Bhoola-Box, 45-50—see also Hay-box
 Birth-rate—see Population
 Blue prints, 26n, 263, 281
 Books, 173, 173n, 209, 270, 271, 288, 289, 291-3
 Bored-holes, 34n, 35
 Boy Scouts, 16, 69, 128, 142, 151, 154n, 158, 174-7, 179, 180, 183, 186, 190-3, 201, 222, 259, 281
 Bribery, 122, 230, 233, 279
 Bunds, 58, 84, 271, 274, 276, 280
 Cactus, 248
 Canal water, 56-8, 86, 288
 Capital, 52, 220-30
 Capitalist, 2, 25, 224, 226, 227
 Cash accounts, 122, 221, 224
 Cattle, 24, 52, 63, 92-102, 259, 281, 287, 288, 294
 by-laws, 100, 259, 301
 breeding societies (co-operative), 95, 96-102, 162, 281
 breeds of, 98, 275
 co-operative first-aid for, 94, 162
 covering fees for, 102
 diseases of, 94, 275
 exhibitions, 98-9, 211-14
 export trade of, 102
 food, 24, 76, 93, 94, 97
 judging, 99, 213
 markets, 94, 100, 103, 259n
 milk, 92, 96
 prizes, 97, 99, 100, 103, 214, 214n

- title—(cont'd.)
 registration, 95-8, 100, 275
 shows, 97-8, 214
 stealing, 275
 tattooing of, 95, 232, 254, 255, 275
 troughs, 94
 children
 medical examination of school-
 children, 105, 127
 special consideration of, for food,
 etc., 105, 125, 167, 233
 chimneys, 21, 44, 51, 113, 132, 285,
 288
 China, 51, 74n, 173, 235
 Cinemas, 199-201, 232, 280
 Citizenship, 144, 166, 230, 259
 Clay for house repairs, 27, 39-40
 Clean habits, 35, 122, 174, 233, 258
 Cleanliness, 21, 26-28, 103-4, 143-4,
 233
 of eyes, 110-13
 of Government offices, etc., 9, 10
 Co-education, 127
 Competitions, 215, 281
 Compost manure, 31, 51, 60, 258
 P. C. Ramakrishna describes, 233 (1)
 Consolidation of holdings, 22, 26, 32,
 39, 52, 155, 160, 162, 232, 274,
 275, 276, 285, 287
 Cooking arrangements, 44, 45-51
 Co-operation and co-operative socie-
 ties, 16, 21-2, 27-8, 39, 52, 62, 76,
 83, 94-7, 108n, 116, 118-9, 122,
 130, 132, 148-9, 151-64, 163, 187,
 209, 220, 223, 228n, 229n, 231-2,
 234, 236-40, 243-4, 246, 259, 266,
 267, 274, 277, 278, 280-1, 285,
 288, 289
 Court of Wards Estates, 62, 95, 99
 Credit, 220, 222n, 223, 225-6, 267,
 276, 289
 Crime, violent, 122, 230-4
 Crop diseases—see Diseases of crops
 Culture, better living a cultural sub-
 ject, 21, 218, 276
 Dairying, 237, 275
 co-operative societies, 97, 162, 237,
 259, 281
 Dais, 22, 113, 114, 119, 135, 137-9,
 139n, 278, 288
 training, 114, 132
 Debt, 3, 5, 6, 220-30
 Dehai Sudhar Committee, 12, 100,
 158, 178-85, 192, 193, 205n, 210n
 Democracy, success of, 184
 Demonstrations, 196, 197, 201, 217
 Demonstration of Rural Reconstruc-
 tion, 7, 219
 Departmentalism, 178-80, 182-4
 Depressions, 39-41
 Diseases and pests
 of cattle, 94, 269, 275, 288
 of crops, 4, 67-9, 166, 269, 275, 294
 of man, 105-13, 119, 270, 273
 cholera, 106
 enteric, 106
 guinea-worm, 106
 hookworm, 4n, 35, 105
 leprosy, 278
 malaria, 4n, 33, 103, 108-10, 188,
 278
 meningitis, 30
 ophthalmia, 113
 plague, 106, 107
 smallpox, 106
 tuberculosis, 30, 107, 157
 Dispensaries, 112-18, 278
 District Boards, opportunity of, to help
 in cattle improvement, 98-100, 144
 District Officers' Board—see Officers'
 Board
 Doctors, 105, 107, 111-19, 278, 279
 fices—see Fees
 female, 114, 137, 278
 private practitioners, 113
 Dogs, unwanted, 248
 Drains and drain-bricks, 33, 280, 288
 Dramas, rural, 201-3, 232, 262, 281
 Drinking-water—see Wells
 Drudgery for women, 44, 244
 Education, 120-41, 164-77, 270, 271,
 276, 279, 280-1—see Women, edu-
 cation of, and village school
 Egyptian water wheel, 59
 Engineers, opportunities of, for ser-
 vice, 40, 42, 44, 274, 279
 Epidemics, 4, 18, 22, 106, 107, 119,
 125
 Erosion, 54, 69-91, 269, 274, 277, 280,
 281, 285, 294
 Example, 8-13
 of educated classes, 10

Example—(contd.)

- of Government, 9
- of Government servants, 10, 18
- of landlords, 11, 99
- of Royal Family, 9
- of rural leaders, 10-13
- of school, 12, 185
- of village officers, 11
- of soldiers—see Soldiers
- Eyes cleaning, diseases, treatment of, 110-13, 278, 290
- Faction, litigation and quarrelling, etc., 2, 13, 22, 25, 142, 148, 159, 164, 230-4, 247, 265, 270, 273, 284, 286, 295
- Fairs, 212-13, 232, 262
- Famine, 4, 22, 270, 274
- Farm and farming, 4, 52-69, 262, 263, 275-7, 289
- Fatalism out of date now, 4, 22, 166, 284
- Fees, doctors', 113, 115-17, 140
- Fields as latrines, bad farming to use, 35, 59-60
- Flies, 45, 106, 111, 125
- Flowers, 21, 45, 131, 245, 270, 289
- Fly-nets for babies, 45
- Fodder, 51, 74, 97, 241, 241n
- crops, 93
- Food, good, 65, 104-5, 167, 285
- Forest and Forest Department, 71, 73, 80-8, 81n
- Free issues and payment, 14-16, 63, 94, 96, 102, 109-10, 113-17, 143, 158, 180, 182-7, 199, 255
- Fruit, 104, 106, 162, 237-8, 275, 281, 287, 289
- Fuel, 45, 46, 50, 51, 74, 86, 280, 288
- Fumigation of seed stores, 68
- Games, and playing fields, 39-41, 160, 167, 169-72, 211, 213-15, 231-3, 259, 260, 270, 288, 289, 290
- Ghat-making, 44
- Girl Guides, 128, 180, 193, 259, 281
- Girls' education—see Women, education
- Goats, 74, 79, 84, 88, 270-1, 294
- Government revenue, 14, 15, 89, 90
- Government task, 7, 9, 14-18, 23, 84-5, 87-91, 143-4, 230, 276, 280-7

- Gramophone and records, 204, 212, 281, 295-300
- Grass-cutting, 79, 93
- Handicrafts, 244, 263, 279
- Harlog Report*, 125
- Hay-box, 21, 44, 45n, 59, 86, 132, 168, 288, 290, 294—see also *Bhoosa-Por*
- Health, 103-120, 268, 276, 278, 279, 281, 285, 287
- Act, Public, 144, 149
- rural organization of, 113-20, 263, 281
- visitors, 131, 135, 138-40
- Hillside, deterioration of, 69-86, 89, 93—see also Erosion
- Holiday, weekly, 251
- Home, 22, 24-51, 129, 232-4, 244, 289
- Horse and mule breeding, 241-2, 294
- Housewife—see Women
- Idle days, work for, 60, 64n, 79, 232, 238, 245, 251, 270, 289
- Improved implements 63-4, 271, 275, 281, 287, 288, 294
- seed—see Seed
- Improvement, possibility of, 3
- Incentive to self-improvement, 1, 5, 7, 16, 19, 20, 123
- Industrial Co-operative societies, 45, 160, 236, 244
- Industries, subsidiary, 235-45, 263, 294
- Joint effort, 1, 58, 69, 123, 151-64, 177, 181-2, 230-1, 235—see also Co-operation
- Kharas* bullock-driven flour mill, 21, 44, 235
- Kitchens, 44
- Knowledge, the key of progress, 8
- Lac, 243, 275
- Lambardars, 112, 148, 224
- example of, 11
- literate, 12
- Land Administration Manual*, 9n, 89
- Landlords' duties, etc., 2, 11, 98, 99, 102

- Latrines, 21, 82, 34-8, 43, 106, 166, 174, 254, 258, 288
 bored-hole, 35, 36, 254, 300
 flush, 35, 254
 pan, 37
 pits, 36
 quail pit, 36
 trench, 36
 use of fields as, bad farming, 35, 60
 Lead in rural work must come from the top, 13, 20
 Lead, village will follow good, 17, 19-21
 Leaders—see Non-officials
 Litigation—see Faction
 Locusts, 4, 249-50
 Magic lanterns, 200, 214, 232, 293-5
 Malaria, mosquitoes and nets, 4n, 9, 33, 45, 103, 108-10, 125, 176, 188, 252, 259, 271, 278, 287, 289
 Manure, 31-2, 59-61, 275
 chemical, 61
 compost, 60, 258
 green, 61
 Maternal mortality, 136
 Medical
 examination of school children, 105, 127
 organization, 113-20, 271, 276, 281
 organization for women, 135, 140, 276
Mélas, 171, 211, 232, 262, 281
 Mentality of villager, 4
 Midwives—see Dais
 Milk and milch cattle, 74, 77, 84, 92, 96-107, 237, 258, 259, 288
 Model villages, 218
 Models and miniatures, 210, 300-1
 Mule breeding—see Horse and mule breeding
 Municipalities, cattle breeding and milk supply for, 100-1, 258-9
 Newspaper and village newspaper, 17, 173, 182-3, 204-7, 232, 260, 266, 280
 Non-officials, responsibilities and duties of, 2, 8, 9-11, 18, 99
 Objective of Rural Reconstruction not economic, 19, 287-9
 social, 19
 Officers' Board, 17, 178-9, 181, 210n, 235n
 Officials
 responsibilities, duties, etc., in Rural Reconstruction, 2, 9-12, 16-18, 25, 98, 99, 114, 143-4, 235-6, 271, 280-7
 ignorance of, of details of reform, 209
 training of, necessary, 250-1
 Organization, district, 177-94
 medical, 113-20
 multiplicity of, 182-4
 village—see Village
 Ornaments, 245-8, 289
 Outlook, change of, 3, 285-9
 Panchayats, 16, 27-8, 82, 95, 99, 102, 116-9, 132, 144, 146-8, 164, 185, 191, 234, 254, 275, 281, 288
 Patwaris, duty of, 11, 12, 25, 130, 209, 230
 modernization of, 12, 138, 190, 279, 280
 Payment and free issues, 14-15, 96, 101-2, 110, 113, 116, 117, 143, 147, 156, 180, 182-3, 199, 255
 Persian Wheel, 38, 55-6, 58
 Persuasion and compulsion, 144-5
 Pests of crops—see Diseases and pests
 Pictures, 21, 26, 45, 131, 207-9, 245, 270, 281, 288
Pit Pamphlet, 33, 51n, 258n, 290 (1)
 Pits, 31-4, 36-7, 39-40, 43-9, 60, 65, 97, 106, 113, 168, 258, 285, 287, 288, 290, 294
 Plague inoculation, 107
 Ploughing, 64, 66, 217
 matches, 216, 232
 Ponds, 33, 39-41, 108n, 287, 288n
 Poor people and poverty, 13, 15, 19-20, 231
 Population, increase of, 18, 19, 21-3, 123, 123n
 Possibility of improvement, 3, 289
 Posters, 168n, 208-9, 218, 262, 281
 Post-war reconstruction—see Reconstruction

- Post-war reconstruction fund, 263
 Poultry, 236-7, 275, 281
 Pride in home or farm, 24, 27
 Printed material, 209-10, 290-1
 Providence, 28
 Publicity, 17, 82, 162, 194-220, 270, 280-1
 training in, 195
 Public opinion, 81-2, 135, 144, 181, 230-1
 Pumps, 33, 275
 Quarrelling—see Faction
 Quinine, 109 10, 115, 252 3, 259, 271, 289
 Radio—see Wireless
 Rain-water, 40, 54-5, 70-3, 288
 Reconstruction,
 post-war, 268-89
 rural, 1 3, 7, 12-13, 17n, 20, 22, 103, 125, 145, 162, 188, 190, 196, 211n, 218, 250-5, 263
 Reclamation, 162, 274
 Red Cross, 17 116, 142, 158, 167, 179-80, 182, 192, 201, 259
 Regular habits, 30, 35, 122
 Revenues, Government, 14, 16
 remissions of, 16
 Ribbon development, 257
 Roads, 42-3, 66, 141, 155, 257, 275, 276, 280, 283, 287
 Running accounts, 121, 222
 Rural
 Community Board, 184
 dispensaries and hospitals, 113-19, 137-42, 162
 industries, 22, 235, 269, 277-8—see also Village industries
 reconstruction—see Reconstruction
 Reconstruction Committee—see *Desh Sudhar Committee*
 School—see Village
 propaganda, 196, 201, 208-9, 218
 Security, the essence of standard of living, 5
 Seed, 62-3, 65, 67, 195, 275, 276, 281, 285, 288, 290
 Self-control, 35, 122, 166-7, 234
 Self-help, 1-3, 14 17, 101, 151, 154, 154n, 172, 227, 255, 281, 284
 Self-improvement incentive to, 2, 5 7, 14-17, 19, 20, 123, 226, 284, 286 7, permanence and spontaneity in, 3-9
 Self-respect, 35, 122, 167, 260
 Septic tanks, 35 37, 254
 Sheep and wool, 238-11, 275, 291
 Shopkeeper, 25
 Shows, cattle, 98, 242, 260, 280
 one-day, 213-15
 Silk, 243, 275, 281
 Silos, 93, 94, 97, 290
 Sincerity of workers, 17
 Soak-pits, 31
 Social objective of Rural Reconstruction, 19
 Soldiers
 boards, 180, 187, 263, 266
 demobilized (ex-servicemen), 11, 12, 13, 187, 255, 260 8, 272, 281-6
 sewing, 13, 103, 262 4, 285
 Songs and glees, 203, 212, 218, 232, 281
 Spirit of service, 8, 9, 25, 134, 141 3
 Sports—see Games
 Stall-feeding of cattle, 76, 82, 84, 93
 Standard of living, 1-5, 16, 18, 19-23, 122, 152, 227, 229, 269, 270, 270n, 272, 281, 284-9
 Stealing cattle, 254, 275
 Street paving, 27n, 123, 288
 Tattooing of cattle—see Cattle
 Teaching
 absence of, for villagers, 5, 6-7
 of better living at schools and colleges, 10, 217-18, 279, 281
 Thrift, 2, 10, 13, 14n, 15, 20, 56, 120, 153, 161, 221, 226, 229
 Training, 250-1, 262, 280
 in counter-erosion work, 83, 274
 in publicity, 195
 Tuberculosis, 30, 107, 157
 Unemployment, 24
 Untouchables carrying excreta, 37, 253
 Urban
 daily supplies, 237, 259
 outlook, 164
 uplift, 193, 258-9

- Vaccination and re-vaccination, 106, 113, 118, 168, 175, 195, 258, 289, 290
- Vegetables, 104, 113, 237, 258, 291, 287, 288, 289
- Ventilation, 29-30, 103, 113, 168, 176, 250, 285, 288, 300
- Veterinary
 Department, 239, 255
 dispensaries, 236n
 first aid, 162
 hospitals, 91
- Village, 28-51, 287-9
 Farmers' Associations, 8, 150, 158-64
 finance, 220-30, 275, 281, 282-5
 guide, 187, 194, 196, 197, 281
 handicrafts, 158, 244
 industries, 158, 160-1, 243-5, 277, 281, 285, 288, 294
 menials, 26
 newspapers—see Newspaper
 organization, 8, 18, 27, 132, 141-51, 234
 progress book, 151
 roads—see Roads
 sanitary committees, 149
 school, 12, 164-77, 186, 189, 209, 217, 218, 279, 289, 300
 schoolmaster, 12, 25, 112, 165, 173, 186
 school visits, 174
 will follow good lead, 17-18, 20
- Walls, use of, for slogans, 209, 218
- Waste, 2, 20, 121, 277
- Waste water, 33-4, 300
- Waibandi—see Banks
- Water lifts, 55, 58, 59, 275
- Weekly clean-up, 217, 252
- Weekly holiday, 251
- Weeks, 165, 196, 217
- Well-boring, 55, 274
- Wells and drinking-water, 33-9, 55-6, 106, 270, 271, 285, 288
- Wells and well-water for irrigation, 55, 274
- Windows, 29
- Winning the Peace, 255-6, 280-89
- Wireless, 142, 173, 183, 197-9, 214, 232, 252, 259, 260, 262, 266, 270, 271, 276, 280, 281, 283, 288
- Women
 co-education for, 127-8, 279
 doctors for, 114, 136, 137-40, 143
 domestic training, 8, 12, 120, 126, 128, 129, 193, 263, 268, 271, 276, 278, 285
 drudgery, 44, 50, 244-5
 educated, their duty and opportunity, 129, 129n, 131-2, 133-5, 137, 139, 140, 289
 education of, 8, 18, 23, 108, 125-8, 259, 268, 271, 279, 290
 hard working, etc., 27, 244
 higher education, complaints of effect of, 125-6
 importance of, in Rural Reconstruction, 8, 24, 26, 27, 44, 103-5, 114, 120-41, 165, 183, 194, 196, 219, 222, 224, 229, 233-4, 245, 271, 278, 296
 Institutes and organizations, 8, 18, 122, 124, 130-3, 134n, 136, 140, 151, 180, 220, 252, 259, 271, 278, 289
 washing places, 33, 288, 300
 welfare, 124, 124n, 140n, 259, 276, 285
 welfare service for, 133-5, 140, 276, 285
 work for, necessity of money for, 114, 128, 135-6, 140
- Work
 mental and physical, 65-6
 hard, 64, 79, 231-3
- Wool, weaving, etc., 30, 162, 238-4, 244
- Workers, village, 17, 250

